NEEDLEWORK AND CUTTING OUT

AGNES WALKER

£3·50

MANUAL OF NEEDLEWORK
AND
CUTTING OUT

MANUAL OF
NEEDLEWORK
AND
CUTTING OUT

SPECIALLY ADAPTED FOR TEACHERS OF SEWING,
STUDENTS, AND PUPIL-TEACHERS

BY

AGNES WALKER, L.L.A.

LECTURER ON NEEDLEWORK AT THE UNITED FREE CHURCH TRAINING COLLEGE, ABERDEEN

FIFTH EDITION

LONDON
BLACKIE & SON, LIMITED, 50 OLD BAILEY, E.C.
GLASGOW AND DUBLIN
1907

PREFACE.

In preparing these sketches of lessons in Needlework the Author has aimed chiefly at showing how this subject may be *taught* to large classes in a systematic, intelligent, interesting, and practical manner.

The numerous sketches and diagrams with which the letter-press is illustrated, and which form quite a special feature of the work, will be found to facilitate greatly the mastery of the subject-matter, and to give material aid to the teacher in the preparation of her lessons.

Part II., which treats of the cutting out and making up of garments, has been added at the suggestion of many teachers who wished to have in a handy and compact form the various diagrams here given. The Author ventures to express her belief that the effort to attain to greater clearness and simplicity than is usual in such drawings has not been unsuccessful.

If this work succeeds in stimulating young teachers to bestow more thought and care in the preparation of their Needlework lessons, and thus to render this important subject more attractive to the girls attending our elementary schools, it will have fulfilled the purpose for which it was written.

ABERDEEN F. C. TRAINING COLLEGE,
June, 1897.

NOTE TO FOURTH EDITION.

The author is much gratified at the cordial reception the book has received on all hands. It is pleasant to think that her book has proved of such use. The present opportunity of reprinting has been taken to carry out certain alterations and improvements in detail.

September, 1904.

Digitized by the Internet Archive
in 2026

https://archive.org/details/manualofneedlewo0000unse_j6a3

CONTENTS.

	Page
Introduction,	1
Thimble Drill,	5
Needle Drill,	7
Position or Needlework Drill—	
I. Work-holding Drill,	8
II. Needle-holding Drill,	9
III. Making a Stitch,	12
Knitting-pin Drill,	13
Second Lesson in Hemming,	17
Hem Folding,	21
A Series of Knitting Lessons for Standard I.,	23
I. How to Cast on Loops,	24
II. Chain Edge,	25
III. How to Cast off Loops,	26
Top-sewing or Seaming,	27
Purling in Knitting,	32
Sew-and-Fell Seam,	35
Darning,	38
First Lesson in Stitching,	42
Second Lesson in Stitching,	44
How to Cast on Thirty Loops, and Knit with Four Pins,	48
Herring-boning—First Lesson,	52
„ „ Second Lesson,	54
Sewing on of Tapes,	56
How to Fix Hems over the Ends of Seams,	59
Pleating,	62
Gathering, Stroking, and Setting-in to a Band,	65
I. Gathering,	66
II. Stroking of Gathers,	70
III. Setting-in of Gathers,	72
Decreasings on the Leg of a Stocking,	74
How to Darn a Thin Place in Stocking Web,	78
Flannel Patching,	82
Herring-boning of Patch,	86

Page

First Lesson in Cutting Out.—A Square and a Triangle, - - - - - 89
How to Cut Out a Cottage Pinafore by Folding, - - - - - - - - 94
How to Cut Out a Chemise by Folding, - - - - - - - - - 98
How to put on a Strengthening Tape, - - - - - - - - - 99
Sewing on of an Unpierced Linen Button, - - - - - - - - 102
Button-holing—
I. The Stitch on Canvas and on a coarse Linen Band, - - - - 105
II. The Rounded End of Button-hole, - - - - - - - - 108
III. The Square End of Button-hole, - - - - - - - - 110
IV. How to Cut and Work a Button-hole on Calico, - - - - - 112
Cutting-out Lesson.—Child's First Shirt, - - - - - - - - 115
How to Cut Out a Pinafore for Girls in Standards I. and II., - - - - 121
The Dutch Heel, - - - - - - - - - - - - - 123
How to pick up the Side Loops of the Heel and make the Gusset of a Stocking. - 126
How to Knit the Toe of a Stocking, - - - - - - - - - 128
How to Darn a Hole (common method), - - - - - - - - 130
First Lesson in Marking, - - - - - - - - - - - 134
How to Finish the Front Opening of a Chemise, - - - - - - - 140
The Preparation of a Cross-way Band for the Sleeve of a Chemise, - - - 142
Flannel Seams, - - - - - - - - - - - - - 145
How to Make a Placket-hole in a Petticoat, - - - - - - - 148
"Piping" or "Cording Material", - - - - - - - - - 150
Preparation of Tucks, - - - - - - - - - - - - 154
Sewing of Tucks, - - - - - - - - - - - - - 157
Calico Patching, - - - - - - - - - - - - - 160
Print Patching, - - - - - - - - - - - - - 165
Run-and-Fell Seam, - - - - - - - - - - - - 171
The Gusset, - - - - - - - - - - - - - 173
Whipping and Sewing-on a Frill, - - - - - - - - - 178
Coral or Feather Stitching, - - - - - - - - - - 182
How to Cut Out and Make a circular Band for a Petticoat, - - - - 186
Binding of Flannel, - - - - - - - - - - - - 189
Scalloping, - - - - - - - - - - - - - 192
How to Prepare the Front Opening of a Night-dress, - - - - - - 195
Cross-cut Darn, - - - - - - - - - - - - - 198
The Hedge Tear, - - - - - - - - - - - - - 203
Loops and Eyelet Holes, - - - - - - - - - - - 207
Chain Stitch, - - - - - - - - - - - - - 209
Single Hem Stitch, - - - - - - - - - - - - 211
Swiss Darning, - - - - - - - - - - - - - 212
Grafting, - - - - - - - - - - - - - - 216
Stocking-leg Darn—Lesson I., - - - - - - - - - - 219
„ „ Lesson II., - - - - - - - - - - 223

PART II.—CUTTING OUT.

Page

Key to the Cutting-out Diagrams, - - - - - - - - - - 227

Cutting-out Diagrams—

Pinafores for Infants up to 2 Years, - - - - - - - - - 228
Pinafores for Standards I. and II. Children, - - - - - - - - 229
Pinafore with Shoulder Straps for Child of 2 Years, - - - - - 230
Woman's Chemise, - - - - - - - - - - - - - 231
Half Chemise—Full size, - - - - - - - - - - - 232
„ for Girls of 10 to 12 Years, - - - - - - - - 232
Child's Petticoat Bodice, - - - - - - - - - - - 232
Half Chemise for Child of 5, 7, and 9 Years, - - - - - - - 233
Overall for Child of 6 Years, - - - - - - - - - - 233
Chemises, - - - - - - - - - - - - - - 234
Man's Night-shirt, - - - - - - - - - - - 235, 236
Shirt for Boy from 10 to 12 Years of age, - - - - - - - - 237
Baby's Night-dresses, - - - - - - - - - - - - 238
Upper Part of Night-dress without Blouse, for Girls 12 to 15 Years, with Sleeves, &c., - - - - - - - - - - - - 239
Night-dress with Yoke for Girl of 15 Years, - - - - - 240, 241
Half Yoke and Sleeve for Chemise, - - - - - - - - - 241
Woman's Night-dress, - - - - - - - - - - - 241, 242
Baby's Frock for First Shortening.—I., - - - - - - - - 243
Frock Bodice for Child of 2 Years.—II., - - - - - - - - 243
Low-necked Body for Child of 2 Years.—III., - - - - - - - 243
Girl's Petticoat, - - - - - - - - - - - - - 244
Woman's Flannel Petticoat, - - - - - - - - - - - 245
Woman's Cooking Apron, - - - - - - - - - - - 246
Child's Drawers, 5 to 6 Years of age, - - - - - - - - - 246
Girl's Knickerbockers, - - - - - - - - - - - - 247
Woman's Knickerbockers, - - - - - - - - - - - 248
Girl's Combinations, - - - - - - - - - - - - 249
Full-sized Day-shirt, - - - - - - - - - - - 250, 251
Low-necked Bodice, - - - - - - - - - - - - 252
Barrow Coat, or Infant's Flannel, - - - - - - - - - 252

Directions for making up Pinafore with Shoulder Straps, - - - - - - 253
Directions for making up a Woman's Chemise, - - - - - - - - 254
Directions for making up a Boy's Shirt, - - - - - - - - - - 257
Directions for making up a Woman's Night-dress, with Yoked Back and Tucked Front, - - - - - - - - - - - - - - - - 260
Directions for making up a Pair of Drawers for a Child of Five Years, - - 263

Page

How to make up a Petticoat with a Bodice, - - - - - - - - 265
Directions for making up a Child's Overall, - - - - - - - - 267
Mantua-maker's Seam, - - - - - - - - - - - - - 269
Counter-hem Seam, - - - - - - - - - - - - - 270
Bodice or Double French Seam, - - - - - - - - - - - - 272
Knotting, - - - - - - - - - - - - - - - 274
Flat Binding, - - - - - - - - - - - - - - 275
Joins in Feather Stitching, - - - - - - - - - - - - 276
Joins in Button-holes, - - - - - - - - - - - - - 277
General Remarks on Calico Patching, - - - - - - - - - - 278
General Remarks on Hedge Tears, - - - - - - - - - - 280
General Remarks on Cross Cuts, - - - - - - - - - - - 281
General Remarks on Hemming, - - - - - - - - - - - 283
General Remarks on Sew-and-Fell, - - - - - - - - - - 284
How to turn Corners in Flannel Patches, - - - - - - - - - 285
Overcasting, - - - - - - - - - - - - - - 286
How to finish a Sleeve with False Hem and Embroidery, - - - - - - 287
Scale of Proportions for Chemises, - - - - - - - - - - 290
Scale of Proportions for Drawers, - - - - - - - - - - 290
Scale of Proportions for Night-dresses, - - - - - - - - - 291
Scale of Proportions for Shirts, - - - - - - - - - - 292
Calico Sampler for Pupil-teachers—Fourth Year, - - - - - - - 294
Flannel Sampler for Pupil-teachers—Fourth Year, - - - - - - - 295

SCHEMES OF LESSONS UNDER THE CODES IN NEEDLEWORK.

As the Needlework Schedules for England and Scotland are not as yet alike, the following Table has been prepared as a guide to the applicability of the lessons of the book to the requirements of the English and Scotch Codes respectively.

A.—UNDER ENGLISH CODE	B.—UNDER SCOTTISH CODE
INFANTS	INFANTS
1. Needle Drill. (Pp. 7–9.) Position Drill. (Pp. 9–12.)	1. Needle Drill. (Pp. 7–9.) Position Drill. (Pp. 9–12.)
2. Strips, 18″ × 2″, in simple hemming with coloured cotton in the following order, viz.: (1) Black, (2) Red, (3) Blue. (Pp. 9–12, 17–23.)	2. Strips, 2″ × 12″, of soft loosely woven calico to be hemmed with coloured cotton: (1) Red, (2) Blue. (Pp. 9–12; 17–23.)
3. Knitting-pin Drill. (Pp. 13–16.)	3. Knitting-pin Drill. (Pp. 13–16.)
4. A strip knitted, 12″ × 3″, in cotton or wool, or four small squares, 3″ × 3″. (Pp. 24–27.)	4. A strip knitted on two needles, 12″ × 3″, in cotton or wool, or four small squares, 3″ × 3″. (Pp. 24–27.)
CLASS I	*Junior Division*
1. Hemming, seaming (top-sewing), felling. A small untrimmed garment or other useful article showing these stitches. (Pp. 17–23; 27–31; 35–38.)	GROUP A
2. Knitting, two needles, plain, *e.g.* a strip or a comforter. (Pp. 23–27.)	1. Hemming, seaming (top-sewing), felling. A small untrimmed garment or other useful article showing these stitches. (Pp. 17–23; 27–31; 35–38.)
CLASS II	2. Knitting on two needles, plain and purl, *e.g.* cuffs, vests, strips for petticoats, &c. (Pp. 23–27; 32–34.)
1. The work of the lower class with greater skill. A small untrimmed garment or other useful article showing these stitches. (Pp. 17–23; 27–32; 35–38.)	
2. Knitting, two needles, plain and purled, *e.g.* cuffs or any simple article, vests, strips for petticoats, &c. (Pp. 23–27; 32–34.)	
CLASS III	*Junior Division*
1. Previous work. Stitching on coarse material (pp. 42–48), pleating and sewing on strings, (pp. 56–65). A simple untrimmed garment, a pinafore, an apron, a petticoat. (Pp. 59–65).	GROUP B
2. Herring-bone stitch on single-thread canvas, or on cheese-cloth. (Pp. 52–56.)	1. Pleating (pp. 62–65), sewing on tape strings (pp. 56–61). A simple garment, *e.g.* pinafore, apron, petticoat. (Pp. 59–65.)
3. Darning (simple) on single-thread canvas or on cheese-cloth. (Pp. 38–42.)	2. Knitting, four needles, plain and purl, *e.g.* cuffs, welts of socks, &c. (Pp. 48–52.)
4. Knitting, four needles, plain and purled, *e.g.* cuffs, welts of socks, &c. (Pp. 48–52.)	

Class IV

1. Gathering and setting in. An untrimmed garment, *e.g.* a chemise, child's overall, &c. (Pp. 66–74.)
2. Darning, plain (as for thin places), on stocking-web material. (Pp. 38–42; 78–82.)
3. Knitting, four needles, a simple knitted garment. (Pp. 48–52; 74–78.)
4. Patching on coarse flannel (herring-bone stitch). (Pp. 82–89.)
5. Cutting out in paper a child's chemise or plain pinafore (two sizes), to be cut out by some simple scale of proportion. (Pp. 89–98.)

Class V

1. Previous work. Button-holing (pp. 105–115) and sewing on of buttons (pp. 102–105). Putting in tape loops and strengthening tapes (pp. 99–102). A simple garment to be cut out by maker. (Pp. 115–121.)
2. Knitting, four needles, a simple knitted garment. (Pp. 48–52; 74–78; 123–129.)
3. Plain darning a hole in stocking-web material. (Pp. 130–134.)
4. Cutting out in paper and in material a garment suitable for making up in Class III. (Pp. 115–123.)

Class VI

1. The work of previous classes, and tuck running (pp. 154–159). Any garment (showing the stitches of this and previous classes), to be cut out by maker. (Pp. 140–157; 171–173.)
2. Patching in calico and print. (Pp. 160–171.)
3. Cutting out in paper and material a garment suitable for making up in Class IV. (Pp. 227–253.)

Class VII

1. Previous work and gusset-making. (Pp. 173–177.)
2. Darning on coarse linen (diagonal cut), and on woollen material (hedge tear). (Pp. 198–207.)
3. Cutting out in paper a reduced and an enlarged pattern of the garment selected for the year's work. (Pp. 227–253.)

Senior Division

Group A

1. Gathering and setting in. An untrimmed garment, *e.g.* a child's chemise, woman's apron, &c. (Pp. 66–74.)
2. Darning on canvas and on stocking-web material. (Pp. 38–42.)
3. Herring-bone stitch on canvas or cheese-cloth and flannel. (Pp. 52–56.)
4. Knitting a sock or stocking. (Pp. 48–52; 74–78; 123–129.)

Senior Division

Group B

1. Sewing on buttons (pp. 102–105), making button-holes (pp. 105–115), setting on strengthening tapes. (Pp. 99–102.)
2. Plain darning a hole in stocking-web material. (Pp. 78–82; 130–134.)
3. Cutting out in paper, and afterwards in material, two simple garments; one of the garments to be made by the cutter out. (Pp. 115–123.)

Senior Division—Group C

1. Patching in flannel, calico, and print. (Pp. 160–171.)
2. Tuck running; stitching. (Pp. 154–159; 42–48.)
3. Cutting out a garment to be made up by the cutter out (the principal stitches in plain needlework to be shown in the garment). (Pp. 227–253.)

MANUAL OF NEEDLEWORK.

INTRODUCTION.

A few words on the requisite **apparatus** for the teaching of this subject may not be out of place, for though students in training colleges are all familiar with the Demonstration Frame, the Patent Paragon Apparatus, the Stockwell Frame, and the Chequered Cutting-out Board, many teachers are not.

I.—The Demonstration Frame (see illustration) is very useful for the teaching of all stitches worked on the flat, such as stitching, herring-boning, gathering, running, marking, button-holing, &c. It consists of two parts—the frame proper, which is about 20 inches square, with tapes inserted to represent the different threads of the material, and a stand to hold the frame. The complete apparatus may be obtained from 10*s.* to 13*s.*, the frame by itself for 5*s.*

Any teacher could easily construct a substitute for it with an old slate frame, a few tacks, and a piece of narrow tape.

II.—The Patent Paragon Apparatus (referred to as P.P.A. in the lessons) consists of about eighteen complete and enlarged specimens of the Sewing exercises required from pupils in Elementary Schools.

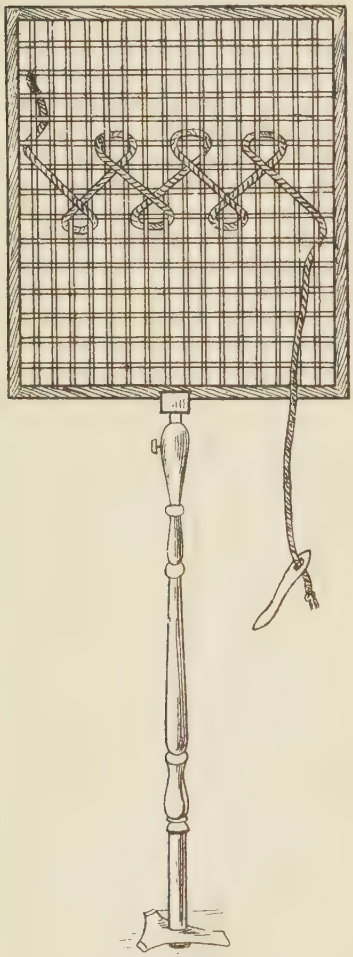
With these the *tacking* and *working* of each stitch in plain needlework can be demonstrated with ease.

The *placing* or *fixing* of the work may be taught to *some extent* with the apparatus, but the Black-board, and lined or plain tissue paper, are best for this purpose.

The stitches are worked through eyelet holes placed at regular intervals of about 1 inch.

To hold the various sheets in full view of a class, a wooden frame and stand are necessary. The inner edges of the frame are furnished with steel hooks, on which the various sheets are hung. Each sheet may be obtained

separately, and lists of prices, with diagrams of the various specimens, will be forwarded on application to E. & A. Lambert, 38 Mayfield Road, Kingsland, London, E.



III.—The Stockwell Demonstration Frame (Hull's Patent) is an improved form of the Demonstration Frame. It costs 12*s.*

IV.—The Chequered Cutting-out Board is one of the most useful parts of the Needlework apparatus. It is indispensable for the cutting-out of garments, and it is also most useful for drawing diagrams of the various stitches, &c. Chequered in blue squares of 1 inch, with a red line at every ninth or fourth inch, they cost from 10*s.* 6*d.* to 15*s.* If chequered on both sides, they may be obtained from 12*s.* 6*d.* to 17*s.* 6*d.*

I need scarcely add that the Black-board and coloured chalks are indispensable.

Many teachers will say, "Our School Boards will not grant us such costly apparatus".

Well, I grant there are Boards composed of members who require to be educated to their duties and responsibilities.

But there are others who will not hesitate to give any reasonable amount of apparatus, provided their teachers make a proper use of it.

I was startled a few months ago to hear the Clerk of one of the largest School Boards in Scotland say, "We should be very willing to give each of our schools a set of the Patent Paragon Apparatus if we thought the teachers would make use of it. But many of our teachers ask apparatus solely to show it off, and not to teach with it."

Teachers should not ask too much at one time either. Get it little by little, if you cannot get it all at once. And if School Boards will not grant the apparatus, an earnest and devoted teacher will make it for herself.

Indeed, the finest Needlework has often been found in the most poorly-

equipped schools; a piece of sacking, a coarse needle, a coloured cord, and paper specimens being the only tools the teacher had to work with.

Apparatus is by no means the main thing in teaching Needlework.

Patience, common sense, ingenuity, and, above all things, enthusiasm, are the chief things to be desired in the teaching of this, as of every other subject.

Diagrams.—In the Sketches of Lessons the words "Draw a diagram on B.B.", or "Show a diagram", frequently occur.

If these are diagrams illustrating the position of the needle, &c., when making the various stitches used in Needlework, they should be sketched on the B. B. in coloured chalks *before the class*, as even a rough diagram done in presence of the pupils will often illustrate a point much better than the most finished picture.

But, unless the teacher be a born artist, the more intricate diagrams (especially some of the Knitting and Darning ones) ought to be *permanent*, and they should be drawn on a much larger scale than any I have as yet seen *published*, if they are to be of any practical value.

What are called diagrams in Sewing Manuals are not really diagrams at all, but pictures of actual objects. All such "diagrams"—we use the term in its popular sewing-book sense—in the following pages are copied direct from the objects.

Materials.—As the *Materials* required are prefixed to each lesson, I shall only make a few general remarks on these.

Teachers should endeavour as far as possible to get such materials as are *most suitable* for teaching the actual stitches to their pupils. Some teachers tell me they need no materials for practice, as they use up all their "cuttings" for this purpose. Now, if teachers considered well the proper widths of calicoes, &c., before cutting out their garments, they would have few, if any, "cuttings". And whereas these "cuttings" *may* be profitably used in the upper standards, it is *false economy* to use them in the lower ones; for the materials used for garments are generally, and ought to be, finer than those used for "practice pieces", and if there be any danger more likely to be incurred than another in teaching Sewing (Schedule III.), it is that of straining the eyesight of the pupils by the use of too fine textures, and the production of "microscopic" stitches. For the same reason, as well as to give more interest and variety to the work, it is advisable to use coloured sewing cottons, &c., for "practice pieces". *Black* thread is prescribed in the Code for Infants' strips, but as it is not good for the eyesight, green is preferable, and pupils generally prefer blue and pink.

Needles and thread especially ought to be of the best quality, for nothing is more irritating and discouraging to a child than to have her needle breaking, or her cotton knotting, when she is trying to do her very best.

Lists and samples of materials may be obtained from Cox & Co., 101 New Oxford Street, London; Venables & Sons, London; Arnold & Co., Leeds; Robert Henderson, 35 Union Street, Aberdeen, &c.

I shall regret the publication of these sketches of lessons if from them any teacher should infer that she must teach Needlework exactly by the methods laid down therein. Needlework lessons ought to be object lessons, and as such should be treated in as original a form as possible.

The purpose of the following pages is to help the teacher or student by showing how the lessons have actually been taught, what apparatus was employed, and what drawings for the Black-board. Each teacher will modify her teaching to suit the special circumstances of her class and school.

To those teachers of Needlework who are feeling discouraged because of the peculiar difficulties which must attend the teaching of what is really not a mere intellectual subject, but *a domestic art requiring time to practise it*—the apathy and indifference of headmasters, who often think and act as if girls sewed by instinct, or the irrational and absurd manner in which the work is judged, or (as often happens) not judged at all,—I would say, "Look beyond and above all these hindrances to the *social value* of your subject", for, if wisely and intelligently taught, it must develop the artistic taste and constructive faculties of the girls, besides inculcating habits of neatness, cleanliness, thrift, order, and industry in those who are to be the true "Home Rulers" of the twentieth century.

NEEDLEWORK DRILLS.

In the teaching of large classes these drills are admirably suited to instil into the little ones habits of prompt obedience, accuracy, precision, and attention to details, while they cultivate the faculty of observation.

The reason why so many infant teachers condemn them as "useless" and a "waste of time" is that they have attempted to teach them too quickly. More muscular power is needed for the various actions in these drills than teachers seem to be at all aware of, and therefore pupils can never be expected to do them accurately the first time they try them.

Each movement must be carefully explained and shown to the children, and then slow and steady practice will ensure success.

"Make haste slowly" ought to be the motto of those who have to teach Needlework to infants; for liveliness, infinite patience, and untiring energy must be the characteristics of all who are to do it well.

The drills should never extend beyond twenty minutes at a time, and a motion song or a few smart exercises in the middle of the lesson will relieve the monotony.

When demonstrating them the teacher should stand on a raised platform in front of her class, so that she may be seen by each pupil. Occasionally she will have to turn three-quarters round from front to back, that her actions may be clearly seen.

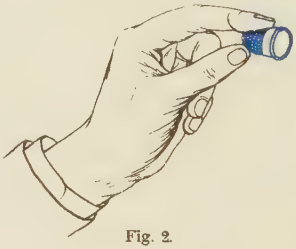
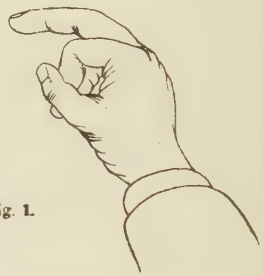
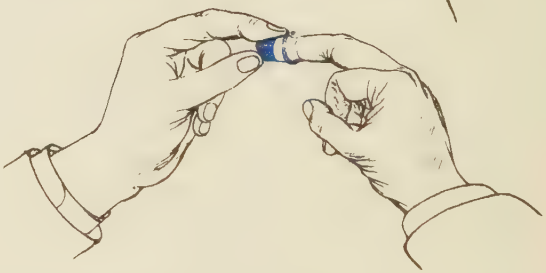
She *may* use her left hand instead of her right, but if she carefully impress on the children that they are to use the hand opposite hers she need experience no difficulty on that point.

THIMBLE DRILL.

Apparatus for Teacher and Pupils.—Thimbles.

Note.—This drill should be preceded by an object lesson on thimbles and their uses, and the pupils ought to be able to distinguish their right and left hands. The children should be arranged in sections, and a censor

appointed to each. The thimbles for each section should be in a small box. Each censor, on getting her box from the teacher, removes her own thimble, and passes the box to her neighbour at word of command —One, two, three, &c. At the end of lesson they are passed back in the same manner, and thus all confusion is avoided.

Command given by Teacher.	Movements of Children and Teacher.
1. Show right hand.	The children hold the right hand with the palm facing the chest, and the tips of the fingers 4 to 6 inches from it, and on a line with the middle of it.
2. Bend second finger. (See Fig. 1.)	 Fig. 2.  Fig. 1.
3. Lift thimble in left hand. (See Fig. 2.)	
4. Put thimble on. (See Fig. 3.)	 Fig. 3.
5. Show it done.	The children extend their right hands perpendicularly (with palms facing teacher) as far as they can stretch.
6. Take thimble off and lay it down.	With thumb and forefinger of left hand they remove their thimbles and place them on the groove of the desk, or on the desk itself. All thimbles to be in a straight line.
7. Show hands.	They extend both hands upward with palms facing the teacher.
8. Fold arms.	They fold either in front or behind back.

NEEDLE DRILL.

Apparatus.—Long darner about 14 inches long, or coarse carpet-needle, and ½ yard coloured twine or cord.

Materials for Children.—Baby threaders, which are thick pointless needles 3 inches long; coloured crochet cotton or fine twine. ⅜ yard will be sufficient for each child.

Command given by Teacher.	Actions of Children and Teacher.
1. Thread in right hand.	The children lift thread about ½ inch from end with thumb and forefinger of right hand.
2. Point the end.	While the teacher says slowly a, b, c, the children scratch the short end between thumb and forefinger of left hand twice and then give it a nice little twist.
3. Needle in left hand.	The pupils lift the threader about ½ inch from the top with the thumb and forefinger of the left hand, and hold them out on a level with their chins, and so as to see the eye of the needle.
4. Thread to eye of needle.	The children bring their thumbs almost together, and the cotton to the eye of the threader.
5. Pass thread through.	While the teacher counts 20 (which 20 will be gradually reduced to 5) the children pass the thread through the eye and a little beyond, then slip the thumb and forefinger of the right hand over the top of the threader, and catching hold of the small end draw it so as to have a long and a short end.
6. Show.	The pupils hold their threaders up in left hand as far as they can stretch.
7. Unthread.	With right hand they draw out thread.
8. Down.	They place threaders on the desk opposite the left hand and the cotton or thread opposite the right one.

Note.—As the children become proficient they should be promoted to No. 5 needles and No. 30 thread, then to No. 7 needles and No. 50 thread.

Many teachers fail to see any use in this drill, because, having transferred their little ones at one step from threaders to No. 8 needles, they have found them unable to thread them.

"One step, and then another" in this as in everything else.

An object lesson on needles, their manufacture, and the dangers connected with their various uses, will teach the little ones to be careful of them, and not to carelessly lose or break them, while a similar lesson on cotton will promote "the thrifty use of that material".

POSITION OR NEEDLEWORK DRILL.

Stage I.—Work-holding Drill.

Apparatus.—Piece of paper or calico 18″ × 14″, with hem 4″ deep, folded and fixed.

Materials for Children.—Small strips of tissue paper or calico 4″ × 2½″, with a fixed hem ¼ inch deep.

Note.—Before commencing the drill proper the children should be taught the name (a hem) and use of the fold; the right and wrong sides of the work; and be exercised in pointing with right and left hands to the right and left ends of the work respectively. The teacher should tell the children that they are now to learn how to hold their work properly. They should place their paper (or calico) strips along the desk with the fold *upwards*.

Command given by Teacher.	Actions of Children and Teacher.
1. Lift work.	The children lift the work at the right-hand top corner with the thumb and forefinger of the right hand.
2. Catch hold with left hand.	Still holding the right-hand corner, they next take hold of the paper fold about one inch from the right end with the left hand, the second joint of the left-hand thumb being bent; the thumb-nail facing the chest and half across the edge of hem, and the ball of the thumb being placed on the cushion of the left forefinger. (See Fig. 1.)

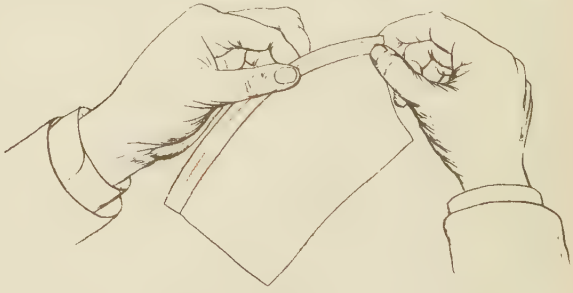


Fig. 1.

Command given by Teacher.	Actions of Children and Teacher.
3. Place work over finger and hold down firmly.	The children next place the right-hand end of the work over the forefinger of the left hand, so that the lower edge of the folded hem just lies above the *bed* of the finger-nail, and they hold it firmly in place with the second finger of the left hand. (See Fig. 2.)

Fig. 2.

Note.—It is better for children to place their work over *one* finger as it is (1st) easier held thus than over two fingers, (2nd) the stitches are better shaped when held thus.

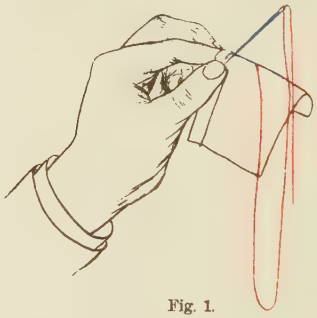
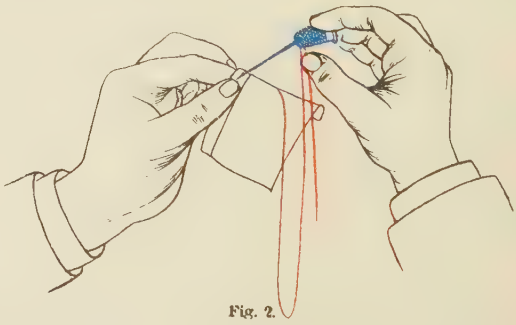
POSITION OR NEEDLEWORK DRILL.

Stage II.—Needle-holding Drill.

Apparatus.—Hemming sheet of P.P.A. or coarse specimen with needle and coloured thread; strip similar to that used by the children.

Materials for Children.—Small strips of soft calico with hem $\frac{1}{4}$ inch deep, tacked, and ten hemming stitches made with No. 40 or 50 coloured thread; No. 7 or No. 6 between needles.

Note.—The teacher must show each step with her coarse specimen or the hemming sheet of the P.P.A. as well as on the small strip.

Command given by Teacher.	Actions of Children and Teacher.
1. Place work.	The children put on their thimbles, and place their work as they were taught in work-holding drill.
2. Take out needle.	With right-hand thumb and forefinger they grasp the needle about the middle with the point to the left and the eye to the right.
3. Needle under thumb.	The children then insert the point of the needle between the ball of the left-hand thumb and the hem, and lift the right hand clear from the needle, as in Fig. 1.
	 Fig. 1.
4. Thimble top to needle top.	They next place the top of the thimble on the top of the needle. (Fig. 2.)
	 Fig. 2.

Command given by Teacher.	Actions of Children and Teacher.
5. Thumb to thumb.	They now slip the right-hand thumb down the needle to meet the left thumb, and grasp the needle firmly with the thumb and forefinger. (Fig. 3.)

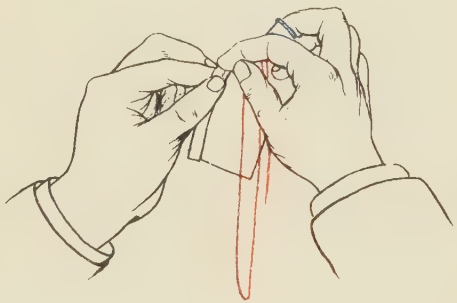


Fig. 3.

6. Raise needle and show.	The children lift the needle up a little, and keeping the second, third, and fourth fingers free, curve the knuckles of the right hand slightly and show the teacher. (Fig. 4.)

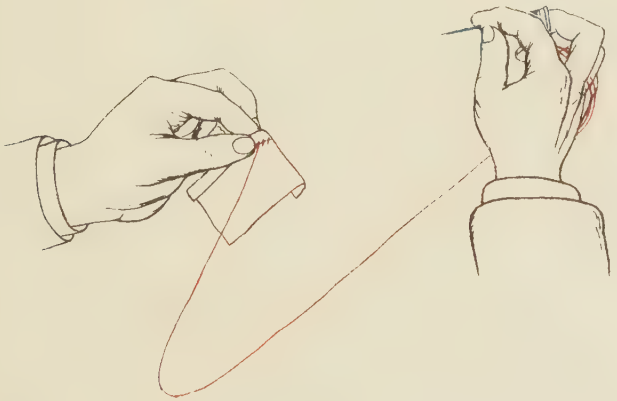


Fig. 4.

POSITION OR NEEDLEWORK DRILL.

Stage III.—Making a Stitch.

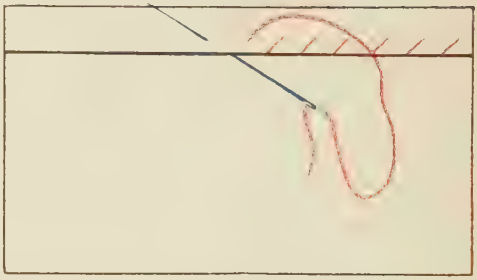


Fig. 1.

Apparatus.—Same as for Stage II.—Needle-holding Drill.

Materials for Children.—Same as for Stage II. in calico, with needle placed as for next stitch. (See Fig. 1.)

Note.—As in Stage II. each step in this drill must be carefully explained and demonstrated by the teacher to the pupils before they attempt to do it. The little ones will be quite proud and eager to step out to the platform and try their skill on the teacher's specimen. Before commencing the drill, the pupils will place their work and get their needles ready as previously taught in Stages I. and II.

Command given by Teacher.	Actions of Children and Teacher.
1. Make a little stitch.	The pupils place the point of their needle a little in advance of the last stitch, immediately under the fold, and bring it out *on* the fold in a line with the stitches previously made. The holes made by the needle when fixed by the teacher will show the exact place to put the needle in. The children must also notice to bring the needle up the middle of the left thumb-nail.
1*a*. See if needle shines through.	The children now raise the work on the left forefinger with the right hand and see if the needle shines through. If it does not they must withdraw the needle and take the stitch again. They must not move the left thumb and forefinger.
1*b*. Turn work back again.	The children replace work as it was before.
2. Push and grasp needle.	The children push the needle through with the thimble, and catch hold of the needle with the thumb and forefinger of the right hand.
3. Draw needle and snap down cotton.	The children draw the needle towards the right shoulder, letting the thread come out between the thimble or second finger and the third one.

Note.—1*a* and 1*b* should be omitted as soon as the children get proficient, as these two movements tend to make the stitches irregular.

KNITTING-PIN DRILL

Apparatus.—Pair of thick wooden or bone pins; 12-ply coloured fleecy worsted or very coarse scarlet cotton. Knitted kettle-holder, washing-glove, &c.; set of children's materials.

Materials for Children.—Two short and rather blunt pointed steel knitting-needles, No. 14; small ball of coloured cotton (2 yds.), with three or four rows of eight loops knitted on one of the wires. The ball is to be placed on the two knitting-needles. Each child should be seated at a desk with work-apron on, and the knitting, &c., in the pocket of it.

Note.—Each of the five divisions of this knitting-pin drill will form a lesson by itself, and at least twenty lessons will be required before the children can be expected to show any proficiency in them, as it is exceedingly difficult for little hands to master the intricate movements required in knitting.

Before beginning the drills call the pupils' attention to their materials. Contrast their knitting-pins with ordinary pins and needles, and compare the thick knitting-cotton with the fine thread they used in hemming.

Introduction.—Show them a knitted kettle-holder or washing-glove, and tell them that if they are diligent and attentive they will soon learn to knit useful things for themselves.

Command given by Teacher.	Actions of Children and Teacher.
I.—*How to place knitting materials on desk.*	
1. Lift.	The children lift work from their lap-bag, and hold in left hand.
2. Draw out.	With right hand they draw out the wire without loops, and lay it *perpendicularly* on the desk opposite the right hand.
3. Let fall.	The children take the little ball off the loop wire, and let it fall into bag.
4. Place on desk.	The children place the needle with loops *horizontally* along the desk opposite the left hand.

Command given by Teacher.	Actions of Children and Teacher.
II.—*Left-hand drill.*	
1. Lift needle and take down loops.	With thumb and forefinger of the left hand the children lift the loop needle about the middle, and holding it *horizontally* draw down the loops almost to the point with the thumb and forefinger of the right hand.
2. Grasp the point.	The children grasp the point nearest the loops with thumb and forefinger of the *right hand* and lift the left hand clear off.
3. Thumb and forefinger over loops.	With thumb and forefinger of *left hand* they grasp the needle about the middle of the loops, and lift the right hand clear off.
4. Let fingers fall.	Still holding it *horizontally* they let the other fingers fall lightly over the wire into the palm of the hand. When the children are proficient in this, accustom them to lift the loop needle and hold it properly at the command, "Left-hand needle into position".
III.—*Right-hand drill.*	
1. Lift wire.	The children lift the wire which was placed *perpendicularly across the desk* about $\frac{1}{2}$ inch from the point nearest them with the thumb and forefinger of right hand. (Fig. 1.)

Fig. 1.

2. Turn back.	The children turn back the needle so that it rests like a pencil in the fork of the hand made by the thumb and forefinger, as in Fig. 2.

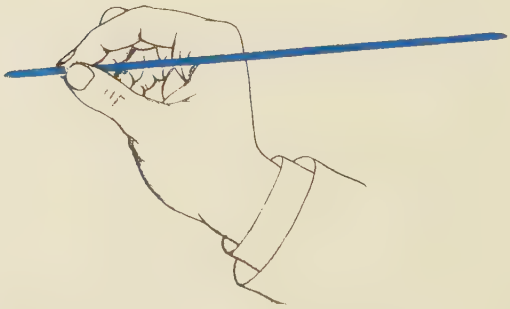


Fig. 2.

Command given by Teacher.	Actions of Children and Teacher.
3. Left-hand needle into position.	The children lift the left-hand needle and hold as directed above.
4. Points together and hold firmly.	The children place the point of the right-hand needle under that of the left for about ¼ inch, and hold both firmly with left thumb and forefinger.
IV.—*Holding worsted.*	
1. Thumb to thumb.	The children slip the right-hand thumb down to meet the left thumb, so that thumbs and needles form a right angle.
2. First finger under worsted.	Holding the wires firmly the children slip the first finger under the worsted so that it lies between the tip and the first joint of the finger.
3. Second and third fingers above worsted.	The children let the second and third fingers fall above the worsted between the first and second joints.
4. Little finger under worsted.	The children next slip the little finger under the worsted. The second and fourth actions may be reversed, and many teachers prefer to twist the worsted twice round the little finger.
V.—*Making a stitch or loop.*	
1. In.	The children push the point of the right-hand needle through the first loop on the left-hand needle from front to back. About ¼ inch of the needle should be pushed through. (Fig. 3.)

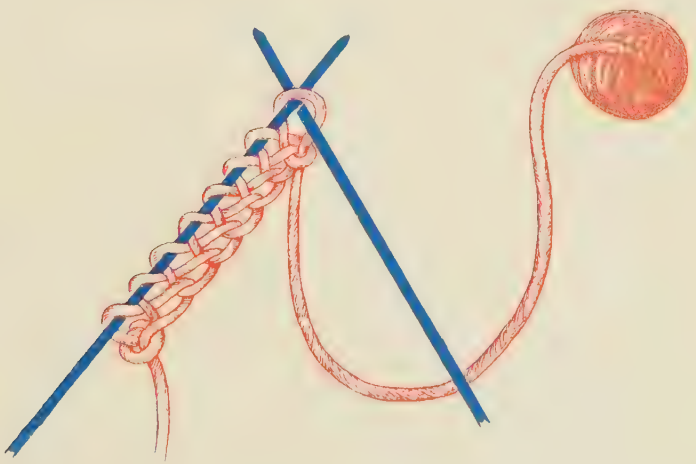


Fig. 3.

Command given by Teacher.	Actions of Children and Teacher.
2. Round.	With the forefinger of the right hand the children bring the worsted under the right-hand needle and up between the needle points. (Fig. 4.)

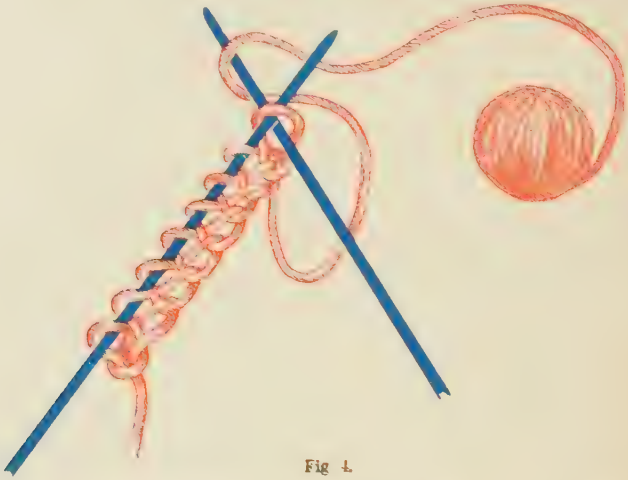


Fig 4.

3. Through.	The children gently bring the worsted with the point of the right-hand needle through the first loop towards their chests. (Fig. 5.)

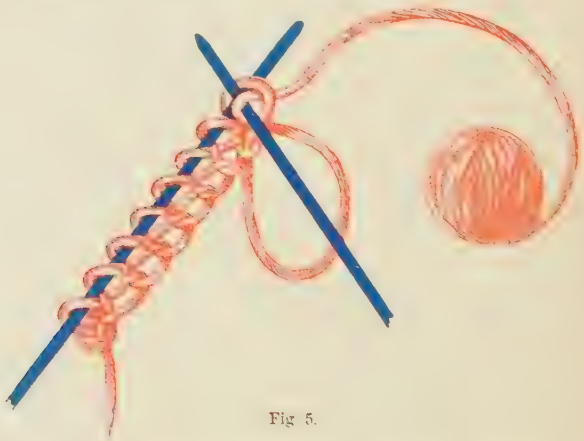


Fig 5.

4. Off.	The children let the first loop on the left-hand needle slip off.

SECOND LESSON IN HEMMING.

Apparatus.—Hemming sheet of P.P.A. or Demonstration Frame; B.B. and coloured chalks; strip of soft calico or small picture handkerchief; specimens of split and horizontal hemming done on Java or coarse canvas.

Children's Materials.—Strip of soft calico 3″ × 2″ with hem ¼ inch fixed, No. 7 needle and two colours of thread.

Introduction.—Show the picture handkerchief, and ask the children what must be done to the edges. Fray out a few of the threads and show that if they did not put on a hem the handkerchief would soon get untidy and gradually get smaller.

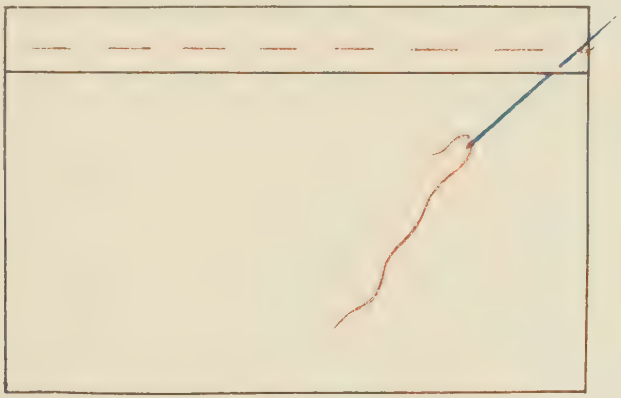


Fig. 1.

I. *What a Hem is.*—Tell the children that a hem is a fold of the stuff turned down to bind in the raw edge, and prevent this wasteful ravelling, and that the stitch used to fasten down this fold is called the hemming stitch, which they learned in Position Drill.

II. *Commencement of Thread.*—Remind the children that when they were babies the teacher commenced their thread and did the first few stitches, but that they must now be taught how to do it for themselves.

III. Bring a child out to show on the P.P.A. the position of the needle when hemming. Then explain that in beginning a thread we insert the needle in

exactly the *opposite* way. Show on the P.P.A. that the needle is put in between the two folds pointing to their right hand, and coming out on the top fold a little above the edge, as in Fig. 1, which should be drawn on B.B. with coloured chalk.

Get a pupil to come out, and place the needle on the P.P.A.

IV. Show the children how to draw out the needle and thread, leaving ½ inch or the length of their thumb-nail. Explain and demonstrate how this small piece of thread has to be tucked under the hem with the side of their needle, to keep the sewing from coming out at that end. Show pupils that they must press this thread down with their left thumb till a few stitches are done, to keep it in its place. Get one or two children to do the same before their class-mates on P.P.A. Then make the children do exactly the same

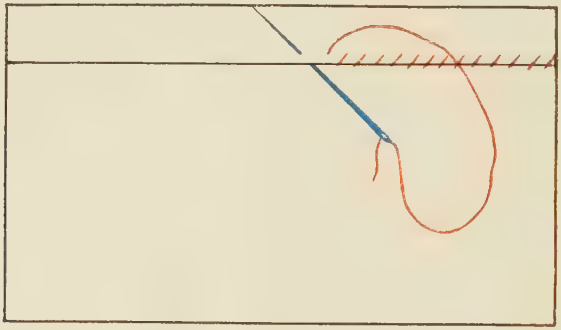


Fig. 2.

thing on their own strips of calico. Examine pupils' work to see if they have done it correctly.

V. Ask the children now to make a few stitches as in Position Drill, and, to arouse them, allow them to repeat the drill: (1) Make a little stitch; (2) Push and grasp; (3) Draw out needle and snap down cotton, two or three times. (Fig. 2.)

VI.—*Proper Size and Shape of Stitch.*—Whilst the children are hemming a few stitches, make the following diagram on B.B. (Fig. 3.)

Tell class that they must now make their stitches more accurately than when they were babies. Call their attention to the diagram on B.B., and show that each stitch resembles the Roman letter V (one-half being on the right side and the other on the wrong), or the head of an arrow, or a triangle

the point of which comes immediately under the hem, and the base of which extends from the top part of one stitch to the top part of the other. Show on P.P.A. or coarse canvas specimen how to form the stitches in this way.

VII. Ask the pupils to go on with their work whilst you examine it, and

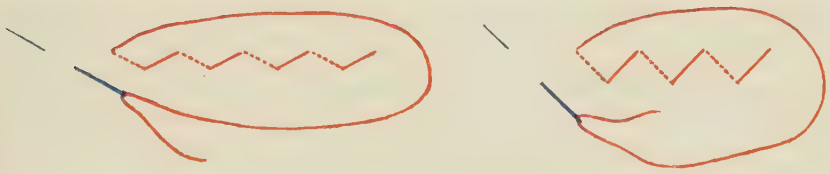


Fig. 3.—(*a*) Fine Hemming for muslin, cambric, &c. Fig. 3. (*b*).

then call their attention to the faults observed, namely, upright, horizontal, split, and too fine stitches. Show specimens of each of these, done on Java canvas or coarse linen, and demonstrate on the coarse canvas how these are made.

VIII. *Joining on New Cotton.*—When the children have hemmed half of their seam make them stop sewing, and, after referring to the possibility of

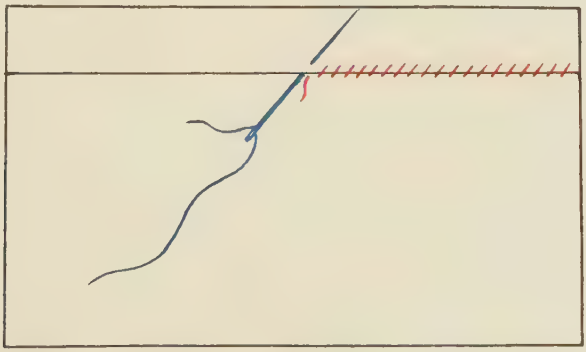


Fig. 4.

their thread breaking or getting done, tell them you are now going to show them how to make a join. Get them all to break their threads. This is best done by twisting one thread twice round the forefinger and giving it a jerk, while the left thumb is held firmly on the stitch last made. Show how to do it. If puckered tell the children to straighten it with the thumb and forefinger. About $\frac{1}{2}$ inch must be left. Show on P.P.A. or coarse specimen how

to slightly raise the hem and unpick half a stitch, so that the thread comes out under the fold. Get the children to insert the needle with the *blue thread* under the fold, and come out at the hole from which the cotton was unpicked (Fig. 4.)

Show the children that they must leave the same length of blue thread as of red thread, and, giving the two ends a little twist, tuck them both under, and proceed.

IX. *Finishing off Thread.*—Show the children, 1st. How to make another stitch over the last one; 2nd. How to put the needle through this second

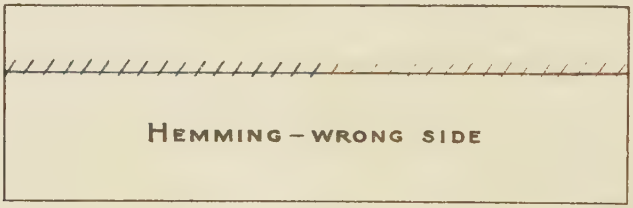


Fig. 5.

Fig. 6.

stitch and draw it tightly to the hem to form a half knot: 3rd. How to slip the needle up under the fold and bring it out about ½ inch from the place where it was inserted before it was broken off.

Remarks on Hems and Hemming.

I. The faults most likely to occur are—

(*a*) *Upright Stitches.*—This is caused by the children putting in the needle underneath the point where the thread came out, instead of advancing the needle a little forward. It may also be caused by putting in the needle in an upright position, instead of along the middle of the thumb-nail.

(*b*) *Straight Hemming*, caused by putting in the needle in a horizontal position.

(*c*) *Split Hemming.*—Children often imagine that the less visible the

stitches are the more perfect is their work. In consequence of this they do not bring their needle through to the right side of the material, or simply overcast the fold.

(*d*) *Too Fine Stitches.*—These are to be condemned, were it only for the sake of the eyesight of the children.

(*e*) *Dirty Work.*—This is always to be found where the children are allowed to use too long needlefuls of cotton, or where they are not taught to bring the cotton out between the thimble and third fingers. $\frac{1}{2}$ to $\frac{5}{8}$ of a yard of cotton should be the length of the children's thread.

(*f*) *Irregularity in the Size and Form of the Stitch.*—Accustom the children to flatten down their work with thumb and finger-nail before considering the seam to be finished, and to notice that the commencement, joinings, and endings off are perfectly secure.

II. Width of hems suitable for different purposes:—

Pocket-handkerchiefs,	$\frac{1}{8}$ to $\frac{3}{4}$ inch.
Bottoms of pinafores, aprons,	$\frac{1}{2}$ to $1\frac{1}{2}$ „
„ chemises,	$\frac{3}{8}$ to 1 „
„ drawers,	$\frac{3}{4}$ to $1\frac{1}{2}$ „
„ night-dresses,	$\frac{3}{4}$ to $1\frac{1}{4}$ „
„ shirts,	$\frac{1}{8}$ to $\frac{1}{4}$ „
„ petticoats,	1 to $2\frac{1}{4}$ „
„ frocks,	$1\frac{1}{2}$ to $2\frac{1}{2}$ „
Ends of towels, sheets, table-cloths,	$\frac{3}{8}$ to $\frac{1}{2}$ „
Openings of garments,	$\frac{1}{6}$ to $\frac{3}{4}$ „
Tops of bolster and pillow-cases,	1 to 2 „
Frills for tuckers and underclothing,	$\frac{1}{8}$ of an inch.
Camisoles, Slip-bodices,	$\frac{1}{4}$ to $\frac{1}{2}$ „

N.B.—For General Remarks on Hemming, see page 283.

HEM FOLDING.

Apparatus.—Sheet of paper with red lines 1 inch apart; piece of Java canvas; coarse needle and scarlet worsted.

Children's Materials.—Piece of ruled foolscap paper, or leaflet from finished copy-book, or lined paper 6″ × 2″, or strip of coarse but soft calico, same size; needles and No. 50 coloured thread.

Note.—Children in Class I. are not asked by the Code to fix their own work, but a good teacher will accustom them to try it, first on paper and then on calico.

Get the children to place the paper with the lines lying from left to right.

I. *How to lay the First Fold.*—The teacher, having reminded her pupils of what a hem is and its use, will, with her lined paper, show them that they must lift their pieces of paper with the thumb and forefinger of their left hands about 1 inch from the right-hand top corner, and with the thumb and forefinger of their right hands fold down *this one inch* to one-half the depth of the space between the lines.

II. *Fold.*—Show the children next how to fold down the same depth with the left-hand thumb and forefinger, about 1½ inch from the right-hand top corner.

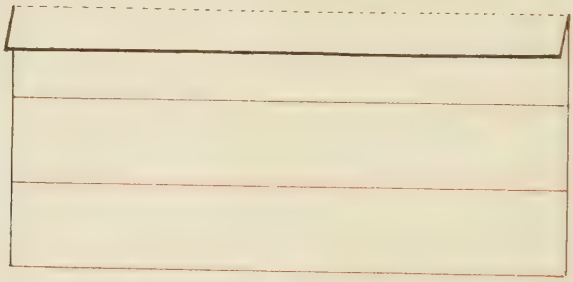


Fig. 1.

III. *Slide.*—Then show the children how to slide the tip of the second left-hand finger along the back of the fold lying between the two thumbs.

IV. *Lift.*—(*a*) Demonstrate clearly before the children how to lift thumb and forefinger of right hand down to those of the left hand, and hold the fold firmly.

(*b*) Raise the left thumb and forefinger, and fold down the same depth 1½ inch from the right-hand thumb.

(*c*) Slide the second finger along the intervening space, and then make the children go on to the end of the material in the same manner to the drill: (1) Lift, (2) Fold, (3) Slide.

V. When the children have reached the end, make them pinch the fold down by sliding the thumb and forefinger along the whole length of it (Fig. 1).

VI. Proceed with the second fold of the hem in the same manner, but ask the children to make it twice as deep, that is, one space of the lined paper. (Fig. 2). When using calico a good rule for depth is, first fold, depth of little finger nail; second fold, depth of thumb nail.

VII. *Fixing or Basting.*—The teacher will then show the children the necessity of fixing or basting the fold, and tell them that for fixing they may put a knot on the thread, but never when sewing.

VIII. *How to make a Knot.*—Show the children that to do so they catch hold of the end of their thread with the thumb and forefinger of the left hand, and, bringing this end round the left forefinger and under the thumb so as to make a small circle, bring the needle through from back to front, and draw the long thread tightly up.

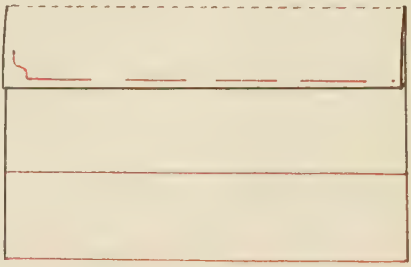


Fig. 2.—Second Fold Basted.

Basting or Tacking Stitches.—On Java specimen show the children now how to hold their work over their first and second fingers with the turned down fold towards them, and to put in fixing stitches. These may be either $\frac{1}{2}$ inch long with $\frac{1}{2}$ inch between, or $\frac{1}{2}$ inch long and $\frac{1}{8}$ inch between. Tell the children they are always quite straight or horizontal, and go from right to left.

IX. On coming to the end show the children how to make a back stitch, and end off.

A SERIES OF KNITTING LESSONS FOR BEGINNERS.

Apparatus.—Card with two pieces of knitting done in 12-ply fleecy wool, one with chain edge and the other with the common or irregular edge; pair of cuffs, one cuff with chain edge and the other with an irregular edge; thick pins, and a ball of 12-ply fleecy wool.

Children's Materials.—Two knitting needles, No. 14 or 15; small ball of coloured cotton.

I. HOW TO CAST ON LOOPS.

(*a*) *How to form a Slip Knot.*—The teacher draws a slip knot on B.B. (see Fig. 1), and asks the pupils to take up their cotton about ¼ yard from the end. After showing what ¼ yard means (about three of their finger lengths) tell the children to hold this ¼ yard with the thumb and forefinger of left hand, so that the ¼ yard falls *inside* the left hand, and the wool attached to the ball is hanging over the *back* of it.

Fig. 1.

Fig. 3.

Then ask the children, 1st, to bring round the worsted attached to the ball and, crossing it over the ¼ yard on the left forefinger, make a circle and hold it fast with the left thumb. (Fig. 2).

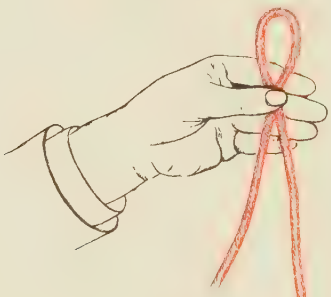


Fig. 2.

2nd. Place the thumb and the forefinger of the right hand through this circle, and draw up the wool attached to the ball. Make them practise this till they can do it quickly.

(*b*) *How to make the other Loops.*—Show them how to

place the point of the left-hand needle through this slip knot (Fig. 3), and draw it up by pulling the long end. Then taking up the right-hand needle proceed to knit it according to the drill; (1) In, (2) Round, (3) Through, (4) On.

"*On.*" *Explain "On".*—Show with the teacher's pins and wool that instead of letting the first loop slip off the left-hand needle they bring the left-hand needle to the front of the right-hand one, and insert the point of the left-hand needle into the loop on the right-hand needle at the side nearest the

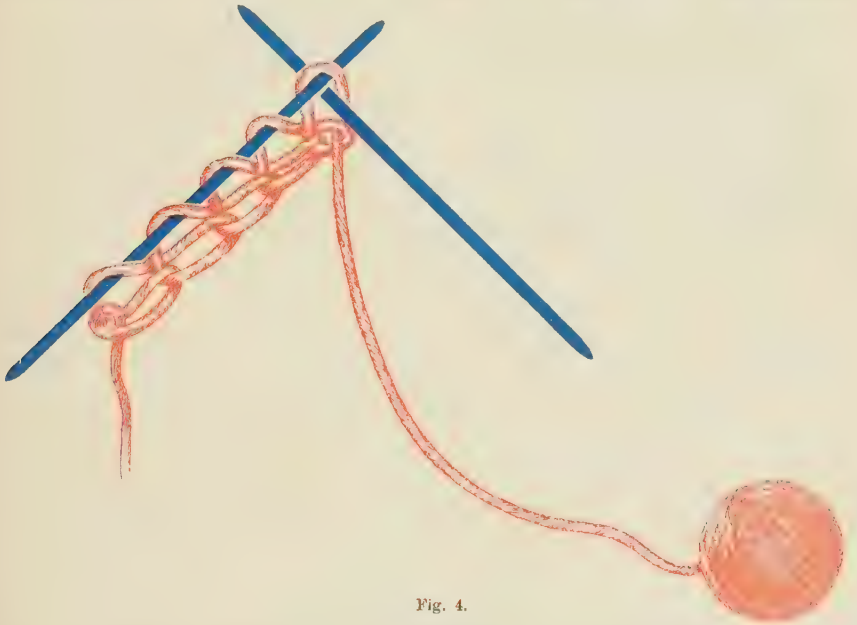


Fig. 4.

right thumb (Fig. 4), and without withdrawing the right-hand needle go on with actions, (2) Round, (3) Through, (4) On, until the children have the requisite number of loops—eight or twelve—and then make them knit two or three rows.

II. CHAIN EDGE.

(*a*) *Explain the name Chain Edge.*—Show the two specimens of knitting (Figs. 5 and 6), and contrast the edges. Get the children to tell which is the prettier, and what they have often made like it with a common pin and a piece of worsted—a chain. Write chain edge on B.B., and tell the pupils it gets this name because it resembles the links of a chain. Show the two cuffs,

and let the pupils see that the one with the chain edges is sewn more neatly and regularly together than the one with the irregular edges.

(*b*) *How to Slip the First Loop.*—Get children to tell how they used to put in their wires when knitting according to position drill—from front to back. Show them that for chain edge they must put in their wires in the opposite direction, from the *back* to the *front*, and slip the stitch off without knitting.

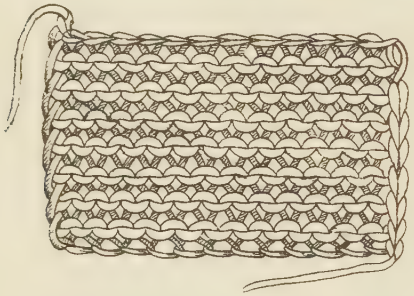


Fig. 5.

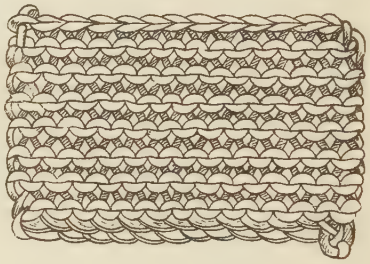


Fig. 6.

Get one or two pupils to do it with the teacher's pins, and then ask the pupils to do it with their own needles.

(*c*) *How to place the Worsted.*—Call the attention of the pupils to the position of the worsted which lies *in front* instead of at the back. Show them how to bring *down* the worsted to the back between the two needles. Examine the pupils' work to see if they have done this first loop accurately.

Let the class now finish the row repeating the drill; (1) In, (2) Round, (3) Through, (4) Off.

(*d*) *Drill for Chain Edge.*—For the first stitch of the next and following rows give the following drill; (1) Into the front, (2) Off, (3) Down.

Note.—The chain edge may also be done by purling the last loop of each row.

III.—HOW TO CAST OFF LOOPS.

(*a*) *Why we Cast off Loops.*—After the children have knitted twelve rows, the teacher will pull out the needle on which her last row of loops was knitted, and show the pupils that if the loops were left in that condition they would run down. Show the cuffs, and call the children's attention to the neat method in which the cuffs have been fastened off.

Tell the children that to make their loops secure, they must *cast them off.*

Write *Casting off* on B.B., and tell the children that, when knitting, "finishing off" is called "casting off".

Get the children to knit two loops by the ordinary drill, and then tell them they are going to add another command to the ones previously given, namely,—

(*b*) (5) *Over.*—Show the children how to bring the point of the left-hand needle to the front of the right-hand needle, and then *explain this "Over"*.

Demonstrate clearly to the children that when two loops are knitted, they must, 1st, place the point of the left-hand needle through the first loop they knitted on the right-hand needle, from left to right; 2nd, lift this first loop over the second loop; and 3rd, let it run down. Point out to the children that only one loop now remains on the right-hand needle, and get them to knit another loop and do the same as to the first one.

(*c*) *Finishing off of Last Loop.*—When only one loop remains, show the children how to draw the worsted attached to the ball through it, and break off, leaving a short end. (Fig. 5.)

Examine pupils' work after the first and the last stitches of the casting-off row.

Impress on the pupils the necessity for casting off *loosely*, else the foot of the strip will be narrower than the top.

TOP-SEWING OR SEAMING.

Apparatus.—Child's pinafore; finished specimen on Java canvas or other coarse material; sew-and-fell sheet of P.P.A., or coarse specimen in Java canvas; demonstration frame; B.B. and coloured chalk.

Children's Materials.—Two of the 14-inch strips they practised hemming on, basted together; needles and No. 50 coloured thread.

I. *Introduce* the lesson by showing the children the pinafore, and telling them they must make one for themselves before the annual inspection. Call attention to the method in which the sailor collar is joined to the body—by a stitch called seaming or top-sewing.

II. *Use of the Stitch.*—Show a band, and draw from children that the stitch is used for joining two pieces of material together, when the raw edges

have been turned in, or to join two selvedges together as in pillow-cases or garments requiring two or more breadths of material.

III. Call the children's attention to its being worked on the right side, and, as in hemming, from right to left.

IV. *Shape of the Stitch.*—Draw the following diagram (Fig. 1) on B.B., and make a few stitches on the coarse linen specimen or P.P.A.; and show the

Fig. 1.

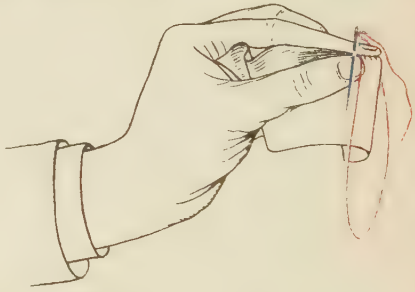


Fig. 2.

children that on the right side it consists of a slanting thread going from right to left, and on the wrong side a straight one joining the two edges together.

V. *How to Hold the Work.*—(*a*) *Left Hand.* Get the pupils to take up the basted strips with right hand, and place them in the *fork* of the left hand, which should be held from 4 to 6 inches in front of the chest.

VI. Show the children next how to place the work along the forefinger of the left hand, and to bring the end of it *round* the forefinger (not over its nail); the thumb and forefinger keeping it firmly in place, and the edges to be low enough to show one-third of the inside of the finger (Fig 2). Also insist on the children pleating up as much of the longer end of the strips as may be held with ease between the left thumb and forefinger, to prevent the shape of the stitch being spoiled.

VII. (*b*) *Right Arm.*—Do a few stitches on P.P.A. to show that, when working, the right elbow and arm must be raised a little from the side, and the needle put in at an angle of 90°, so as to point straight to the chest, the wrist being rounded or curved outwards.

VIII. Show a piece of *puckered* seam, and impress on the pupils that if

they do not hold their hands as directed their work will get into the same condition.

IX. Give a few questions smartly, to see if the pupils understand the way to hold their work, and having got them to hold it properly tell them that they are to commence their work exactly opposite the *bed of the nail.*

X. *Commencement of Stitch.*—Show with P.P.A. how to insert the needle between the two folds, and bring it out through the first fold only, pointing the needle straight to the chest. Get one or two pupils to come out and show how to place the needle. Tell them that when putting in the needle they must only skim the top of the fold, one thread deep being quite sufficient. (Fig. 3.)

XI. Drawing the needle out, show the children that they must leave about ½ inch, or the length of their thumb-nail. This small piece they must lay

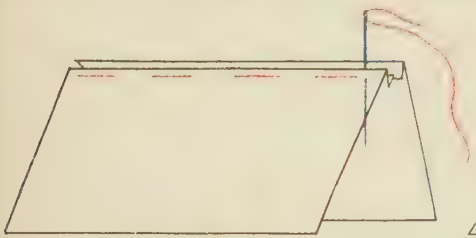


Fig. 3.

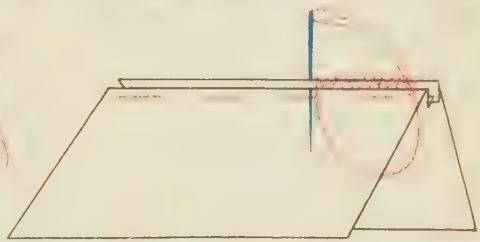


Fig. 4.

between the folds from right to left, but not out of sight. Get a pupil to come to the front and commence the seaming on the coarse specimen.

XII. *Stitch.*—Show the children now that for the next stitches they must cross over two threads towards the left, and bring the needle through both folds. (Fig. 4.)

Question the children on these points: How many threads in depth must I take? How many threads between each stitch? How must I point my needle?

Impress on the children that after the first few stitches they must gauge the distance with their eye, and *not count threads.*

XIII. Tell the children to go on sewing till they come a little *below the first joint of the forefinger,* when they must move their work further round the point of their finger till the stitch last made is a little *below the bed of the nail.* Demonstrate this point clearly. Ask them now to go on till they have

done the half of their seam. Whilst they are doing it, watch them attentively, and examine their work individually, to see if they are holding it properly, &c.

XIV. *Joining of New Cotton.*—Remind the children that the cotton may break, and therefore they must be shown how to join on a new piece. Ask them all to twist the thread round the forefinger and snap it off.

Fig. 5.

Show the children on the P.P.A. or coarse specimen how to put in the needle and unpick the half of the last stitch. If they have snapped it off too closely, make them unpick 1½ or 2½ stitches. When this has been done the end will be between the two folds, as in Fig. 5. Then ask the children to thread the needle with a different colour of thread, and commence as they did at the beginning, the needle to be inserted opposite the half of the stitch already made. (Fig. 6.)

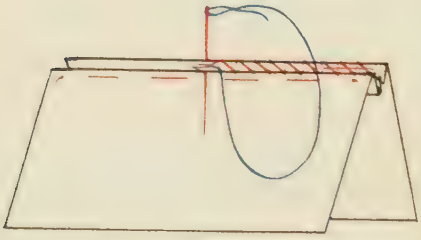


Fig. 6.

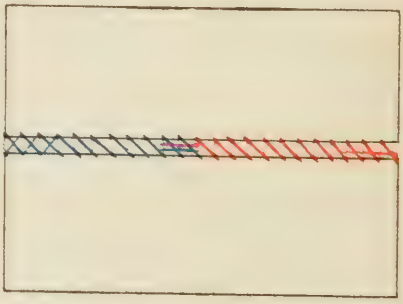


Fig. 7.

XV. *Finishing off.*—Show that, to finish off, the children may turn round their work, and sew back for six stitches, or without turning round, sew back for the same number of stitches. (Fig. 7.)

XVI. *Flattening down Seam.*—Show the children how to draw out basting thread and open out the seam, with left-hand fingers between the two pieces of calico, and left-hand thumb above. After opening it well out, show them how to press the seam quite flat and smooth with the nails of left thumb and forefinger. Impress on pupils the necessity for having these clean if they wish their seams to be so.

XVII. Examine the pupils' work and comment on the faults noticed.

1st. Puckered seams, caused by slanting instead of straight stitches, drawing the cotton too tightly, or holding the work and right arm wrongly.

2nd. Slip stitches, made by taking only one edge for a stitch instead of the two edges.

3rd. Putting the stitches too closely together, or too far down from the top edges.

4th. Insecure fastenings and forgetting to flatten down the seam.

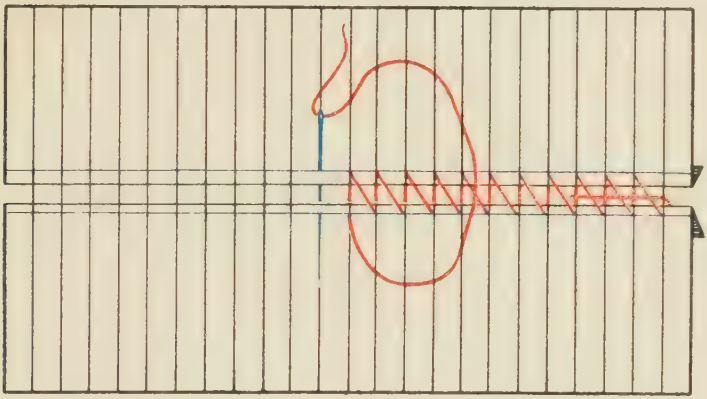


Fig. 8.

Note.—Top-sewing would require at least three lessons:—

1st. How to hold work and the stitch proper.

2nd. Commencement of thread and joining on of a new one.

3rd. Flattening of seams and the chief faults found in top-sewing.

If taken thus, the teacher might use for the first lesson paper or calico ruled as in Fig. 8.

PURLING IN KNITTING.

Apparatus.—Specimens of purling in 12-ply fleecy wool; thick pins and 12-ply coloured fleecy wool; also a ribbed cuff or sock.

Children's Materials.—Two knitting needles, No. 14 or 15; and 2 yards of wool or cotton.

STAGE I.—*Introduction.*

I. Show a specimen strip of knitting done one row purled and the other plain. Get pupils to tell you any difference they see between this specimen and the knitting they did in Class I.

II. Tell them the difference is caused by doing one row purled and the other plain.

Purl.—Write "ribbed", "purled", "pearled", and "turned" on B.B., and explain to pupils that they all mean the same thing, and that their parents will likely speak of the two latter. Also tell them that the word is used in some places for a somersault or throw, and that it is supposed it got that name because the wool or cotton is thrown over the wire in doing it.

III. Ask the children to take up wool and needles, cast on twelve loops, and do one row plain.

IV. Tell the children to slip the first loop of the next row as for chain edge, but not to take down the wool, as the wool has always to be in front when doing purled knitting.

V. Show the children how to do the second loop purled, by (1st) putting in the right-hand needle from right to left through the loop *to the front*; and (2nd) throwing the wool which lies in front over the right-hand needle towards the back, or between the points of the two needles; and (3rd) bringing it up again to the front. Then show them (4th) how to draw through the wool towards the back, or away from the chest instead of towards it, as in plain knitting. (Fig. 2.)

These two points, (1st) the throwing of the wool over the right-hand needle, and (2nd) the taking through of the new loop towards the back, must be demonstrated over and over again by the teacher, and several pupils must be brought out to do them in front of their class-mates, before the teacher can expect the little ones to do them.

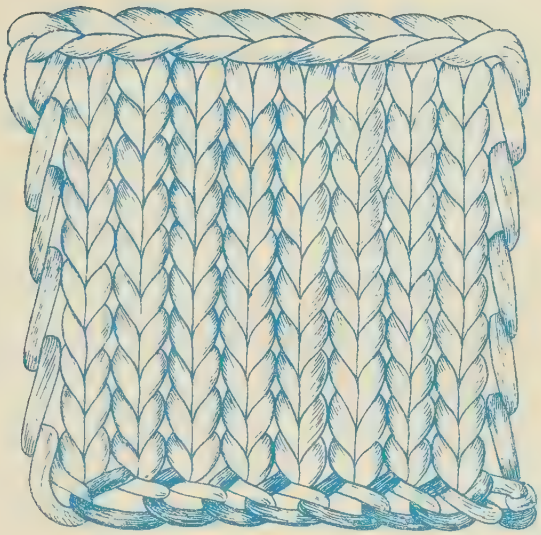


Fig. 1.

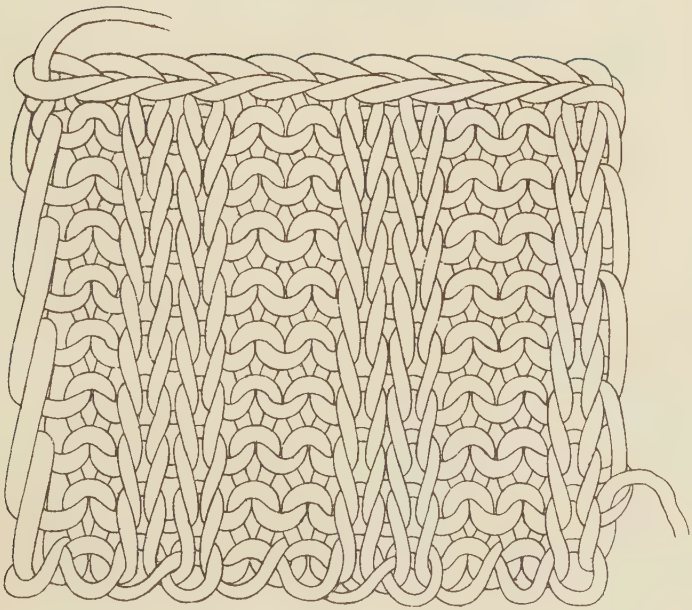


Fig. 2.

VI. Ask the children to go on to the drill—(1) In to the front; (2) Round; (3) Through; (4) Off, as before, till they get to the end of the row, when they must turn.

VII. Now explain that the next row has to be knitted plain, and the only thing to be noticed is, that because the last row was purled, they slip the first loop as if they were about to knit it plain. Therefore the drill will be—(1) In; (2) Off, for first stitch. (1) In; (2) Round; (3) Through; (4) Off, for the next 11 stitches.

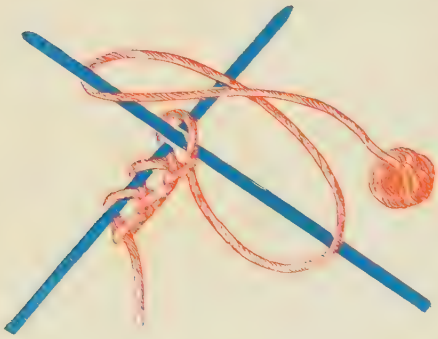


Fig. 2.

STAGE II.

VIII. If the teacher has taught the children to do this stage of knitting well, she will find very little difficulty in teaching the next step in Class II., viz., to do plain and purl alternately, by showing them a nice specimen (Fig. 3), demonstrating it clearly, and using the following drill:—

IX.	First Loop.	Second Loop.	Third and Fourth Loops.
	1. In.	1. In.	1. In to the front.
	2. Off.	2. Round.	2. Round.
		3. Through.	3. Through.
		4. Off.	4. Off.
		(5. Up) { only at the second loop of each pair.	(5. Down) { only at the second loop of each pair.

X. Put on a ribbed cuff: call attention to its elasticity; and tell the children that ribbed garments, when worn next the body, are warmer than plain knitted ones, and fit more closely. Explain why the tops of stockings and socks are ribbed.

XI. After the pupils have got accustomed to this drill, the teacher may just give the command—Slip the first stitch, knit 1, purl 2; knit 2, purl 2; knit 2, purl 2; turn, for each row to the end when they cast off.

XII. Call the attention of the pupils to the appearance of the right and wrong sides of this kind of knitting. They are both the same, as what is plain on one side is purl on the other.

As soon as the children can do this nicely, let them make muffatees.

SEW AND FELL SEAM.

Apparatus.—Chemise or pillow-case with sew and fell seams; two pieces of paper, 16″ × 8″, ruled in heavy red lines 1 inch apart; long black-headed pins; darner and red cord; Black-board and coloured chalk; P.P.A. or coarse specimen on Java canvas.

Children's Materials.—Two pieces of tissue paper or soft coarse calico, 5″ × 2″; small pins; needle and No. 50 coloured thread.

Note.—The folding should be given on extension or lined paper first, for two or three times, and then on calico, the length of the strip being selvedge way. This lesson is to be on calico.

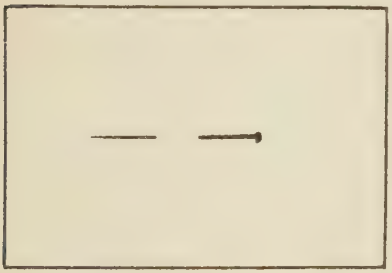


Fig. 1.

Fig. 2.

Introduce by showing the pupils a chemise, &c., with sew and fell seams, and tell them that a sew and fell seam is a very strong way of joining two pieces of material together.

Right and Wrong Sides of the Material.

I. The teacher shows her pupils her pieces of paper, calls their attention to the ruled lines and tells them the lines are to mark the right and wrong sides of it.

II. The teacher then asks the children to take up one of their pieces of calico and calls their attention to the smooth and hairy sides of it. She tells them that the smooth side is the right side, and the hairy side the wrong one. With her black-headed pin she shows them on her ruled paper how to put in a pin horizontally to mark the right side, and gets them to mark the right side of their pieces of calico as in Fig. 1. As the difference between the right and

wrong sides of calico is sometimes imperceptible, a pencilled cross might be put to mark the wrong side.

III. *Fixing of Seam: First Fold.*—The teacher next shows the children with her own apparatus how to turn the wrong side of their calico towards them, and turn down $\frac{1}{8}$ inch deep. Draw the following diagram on B.B. to show what $\frac{1}{8}$ inch is (Fig. 2).

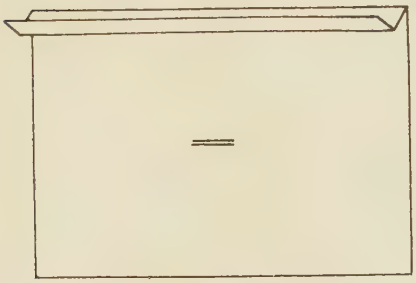


Fig. 3.

IV. Having shown the children the depth, the teacher asks them to take up their work and lay their folds to the drill—Lift, Fold, Slide, as in hemming or hem folding.

V. *Second Fold.*—After this has been done the children lay this folded piece on the desk in front of them, with the folded side turned *upwards*, and taking up their next piece they lay down a fold of exactly the same depth, but on the right side of the calico.

VI. The teacher then draws Diagram 3, and shows the pupils how to turn their work right round so as to have the wrong side next them, and lay another fold a little deeper than the first one, so that the raw edges may not

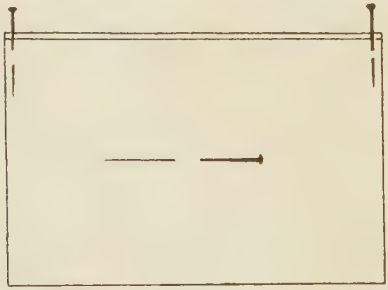


Fig. 4.

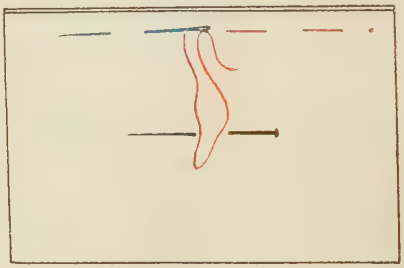


Fig. 5.

be seen. A good rule to give them will be, "Make the first fold two-thirds of the second fold, or lay down six threads for the first fold and nine threads for the second".

VII. *Placing the two Folded Pieces together.*—With the folded paper the teacher shows the children how to place the two pieces exactly above each other, and to pin them together as in Fig. 4.

VIII. Get the pupils to do this, and then make them take up their needles and, holding the piece with the double fold next them, get them to baste it a little from the edge, as in Fig. 5. Examine each pupils' work to see if it is correctly fixed and tacked.

IX. *Seaming.*—The children will now seam it as they were taught, and as described in the lesson on Top-Sewing. After they have seamed it, show them how to flatten it down with the thumb-nail of the left hand, and impress on them the necessity for having these clean if they wish their seams to be so.

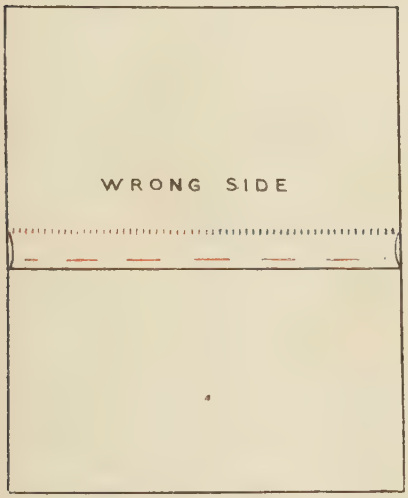


Fig. 6.

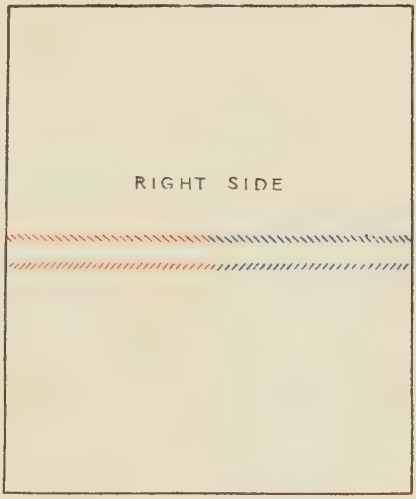


Fig. 7.

Some teachers prefer their pupils to have bone flatteners, or to use their thimble tops for this purpose.

X. *Fell.*—Tell the children to turn their work to the wrong side, when they will see it look like Fig. 6, and find a nice little fold ready to be hemmed down. Write the name of this fold, "fell", on the B.B., and tell them it is called so, either because it falls down over the raw edges, so as to completely cover them, or because it is flattened down over them. Show the fell on the P.P.A., and tell the pupils that a fell in muslin or calico is always a *double* fold, but in flannel a *single* fold which falls over another fold to hide the raw edges.

XI. Show the children how to baste it, as in Fig. 6, and then ask them to

hem it and pay particular attention to their gathering of it up in the fork of the hand so as not to drag it.

XII. Whilst the children are doing so ask them some questions on the rules for the commencing, joining, and finishing off of hemming. Also tell them that their seam will look prettier if they make the hem and seam agree in colour, as in Fig. 7.

DARNING.

Apparatus.—Demonstration Frame, chequered Black-board, large darner, coloured fleecy wool or cord, flannel petticoat or frock which has been darned, specimen done on coarse material.

Children's Materials.—Unlined canvas samplers 6″ × 6″, darner or crewel needle, embroidery or crewel coloured thread.—*N.B.* The canvas should not be penelope but cheese cloth.

I. *Introduce* the lesson by referring to the childrens' baby sisters and brothers crawling on the floor, and ask which garments they usually wear out by doing so—flannel petticoats, &c.; or refer to the sleeves of their own dresses being usually the first part to wear out because of the extra rubbing they get on the desks, &c. Then ask how their mothers usually mend these parts—patching, darning. Tell them that their lesson is to be on darning a thin place, as darning should precede patching. Show the darned garment, and tell them it was darned to prevent it breaking into a hole.

II. Write on Black-board the first rule for darning—"Never wait for a hole". Get the children to repeat it, and elicit from them by questioning why we should not do so. 1st. It saves time; 2nd. it saves temper; 3rd. it looks neater, as a nice darn does not show so much as a patch.

Show the specimen done on coarse material, and explain that darning is simply a kind of handweaving in new mending material, between the selvedge threads, over and under the weft threads, to strengthen them.

III. *Threading Darner.*—Call the children's attention to the materials before them and get them to name them. Tell them that they must now learn

on canvas how to do the darn as they can count the threads better, but that when learned it must be done on flannel or any cloth of like texture. Show the children, with a piece of flannel, that the texture is the same as that of the canvas.

IV. Teach the children, with large needle and fleecy wool, how to thread their darners, as they are not usually threaded as an ordinary needle. Give the following directions:—

1st. Take thread in left hand and darner in right, and hold the thread between the thumb and forefinger, about 1 inch from the end.

2nd. Place the needle *above the thread, along the forefinger* of the left hand, the eye to be nearest the knuckles.

3rd. Take down the short end of wool over the needle, and hold both ends close to the needle so that the needle will be inclosed in a loop.

4th. Draw needle out of the loop and pinch the loop firmly.

5th. Place loop of thread to eye of needle and draw it through with thumb and forefinger of left hand.

V. *How to hold Work and Needle.*—Tell pupils that darning is *usually* done on the wrong side of the material. This can be shown by pencilled cross on the material. Show with canvas sampler how to put the canvas over the first and second fingers, which must be slightly apart, and hold it in place by the thumb and third fingers. The selvedge way of the canvas must lie over the fingers between the little finger and thumb, and they are to darn with the selvedge. Point out that when doing the *up* row of darning the children must rest the needle upon the first and second fingers of the right hand, and hold it firmly with the thumb; when coming *down* they hold it as they usually do, and keep the right elbow well up from the side. Demonstrate all these points clearly.

VI. *How to do the Up Row.*—With Demonstration Frame, special darner 15 inch long, and coloured fleecy wool, show the children that they begin at the left-hand side, as it is less awkward to darn from the left side than from the right, and point the needle from the thumb to the little finger. Let them put the needle in about the length of their thumb-nail from the side and the foot of the canvas, between two selvedge threads, and go up, taking up one thread and passing over one, until they have ten loops on.

VII. *Down Row.*—For second row show on D.F. that the children must cross over one thread towards the right and put in the needle one thread up

above the last stitch of first row, as in Figs. 1 and 2. Show them that they must take up the same number of loops as in the first row, and that they pass *over* the threads that they went *under* in the first row.

VIII. *Why we leave Loops.*—Tell the children to leave a small loop at the end of each row; $\frac{1}{6}$ inch or the depth of two squares of canvas is about the length of the loop. Show this on D.F. Explain that we generally darn a petticoat which has been washed, and therefore *shrunk or grown less.* We

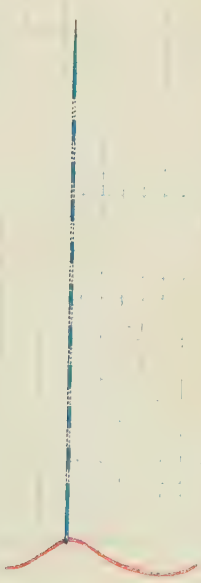


Fig. 1.

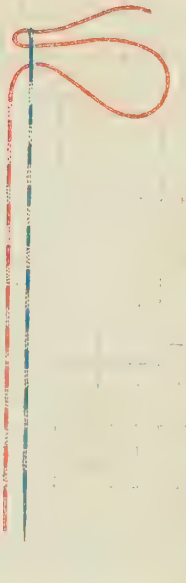


Fig. 2.

Fig. 3.

darn with new material which, when washed, would shrink in, drag the material, and tear the darn from the surrounding cloth; therefore we leave the loops, which allow the thread or worsted to shrink in to that length.

IX. Show on the Demonstration Frame that the third row will be exactly the same as the first, and the fourth the same as the second, in this lesson. This would be quite sufficient for a first lesson.

X. The second lesson would be on the two next rules in darning:

(1) Avoid a straight edge.

(2) Use material as much like the original as possible.

Avoid a Straight Edge.—Show on the D.F. that, if the children make a darn like Fig. 3, the whole weight of the darn would rest on two threads, the

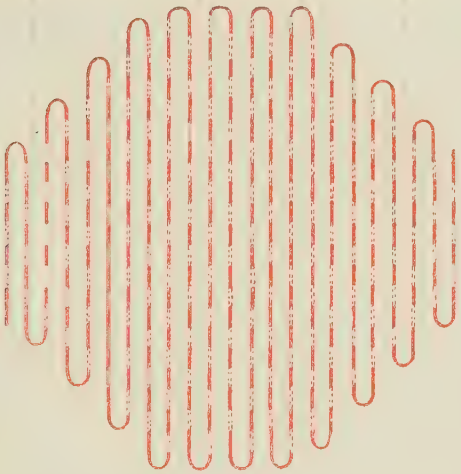


Fig. 6.

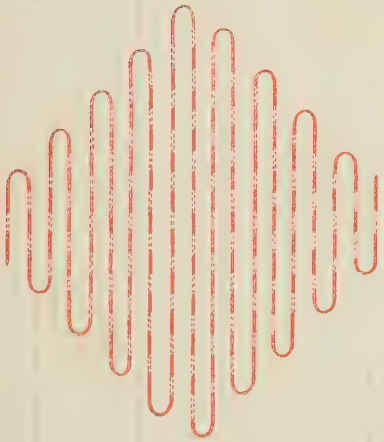


Fig. 4.

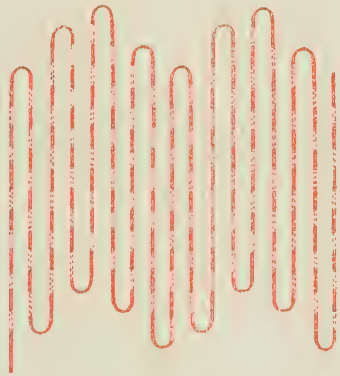


Fig. 5.

one at the top and the other at the foot. The result would be that the piece darned would be torn away from the surrounding cloth and more holes made,

and that therefore the children ought to make them like Figs. 4, 5, or 6, the shape depending on the position of the worn part, but Fig. 6 is the most useful method of doing it. Work No. 4 with the pupils on the D.F.

XI. *Explain Rule No. 3.*—Remind the children how funny it would look to see a girl with the elbow of a blue dress darned in scarlet thread; and tell them that they use wool or cotton of a different colour from their canvas or flannel to let them see their work better and to give them a little variety in it. Write down or underline *Material* and *Original* on B.B. Tell the children the *original* is the stuff which they are to darn, and the *material* is the wool, cotton, or silk they are to use in darning. If the article to be darned is made of wool, then they must use wool, &c., only they might be a little finer in texture.

Write the three rules—(1) Never wait for a hole,
(2) Avoid a straight edge,
(3) Use material as like the original as possible,

on B.B. Get pupils to repeat these, and question them as to their meaning.

As soon as the pupils can do the darn nicely on canvas, let them try it on Lancashire or Yorkshire flannel, which have both very clear and distinct threads. The only difference on flannel or any fine material would be to lift two threads and pass over two when doing the darn, and omit two threads between each row.[1]

FIRST LESSON ON STITCHING.

Apparatus.—Demonstration Frame; chemise with stitched band; specimen of stitching on Java canvas band; set of children's materials; chequered B.B.

Children's Materials.—Sampler lined with calico 6 inches square; darner and embroidery or crewel thread.

Introduction.—Show the children the chemise with stitched band and call their attention to the stitching. Write "stitching" on B.B. and get children to spell it. Tell the class that stitching is usually done on calico or linen, and always on *double* material, but that they must learn on canvas, because it is easier to count the threads. Call their attention to the Demonstration Frame, and explain to them that the

[1] Fine coloured embroidery thread should be used (scarlet shows mistakes best), and the loops left at the end of each row should be from $\frac{1}{8}$″ to $\frac{1}{6}$″ long. The darn must be done on the *smooth* or wrong side of the flannel

tapes of the D.F. represent the threads of their canvas and also those of their calico, and that the squares are the same, only larger.

Commencement of Thread.—By means of the D.F. show how to begin by bringing the needle through from back to front, at the right-hand corner, about four threads from the top, and leave an end (about the length of their middle finger), which they will afterwards finish off.

I. *Rule for Stitch.*—Give the rule: "From the place where the needle comes out insert the needle two threads *behind*, and bring it out two threads *in front* in a straight line". At the same time tell the children they might take three threads or more, according to the fineness of the material.

II. Leave the needle in this position, and question: How many threads behind do I take up? How many in front? How many altogether on the needle?

III. Draw out the needle, and get one or two girls to come to the platform and do it on the frame. Show the pupils that the stitch on the right side is short, covering two threads, while on the wrong side it is long, covering four threads.

IV. Tell the children to take up their needles and canvas and to hold their work as they did for hemming.

V. *Why we Slant the Needle when Stitching.*—Allow the class to do a few

Fig. 1.

Fig. 2.

stitches while you draw a few on the chequered B.B., with the needle in position for a new stitch. Then make the children stop and call their attention to the slanting position of the needle. (Fig. 1.)

Draw the wrong side also (Fig. 2), and show that it resembles a twill or the twisted strands of a rope. Explain on D.F. that if the children put the needle straight through they will split the thread and make it weak, so they must put in the needle either *above or below*. Call attention to the neatness of the stitches on the wrong side when done in this way, and tell them that the stitches on the right side are made more regular by this method.

VI. Examine the children's work to see if they are stitching in straight lines between two threads, and attending to the other points.

VII. *Fastening off Thread.*—When the row of stitching is half done, make the children take their needles through to the back or wrong side of the work, and show them on D.F. how to work back over three stitches. (Fig. 3.)

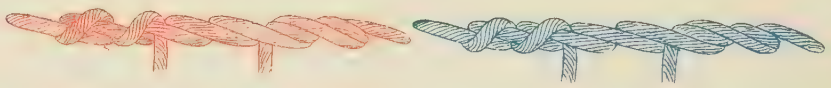


Fig. 3.

VIII. *Fastening on New Thread.*—Then with their new and different coloured thread, tell the children to begin as at first, and then when they have done several stitches, re-thread the end they left at the beginning, and work over three stitches at the back. (Fig. 3.)

SECOND LESSON ON STITCHING.

Stage II.—How to make a Band for Stitching.

Apparatus.—Chemise with stitched band; 1 yard of calico; piece of lined paper, 24 × 18 inches, to make band; stitching band of P.P.A.; B.B. and set of children's materials.

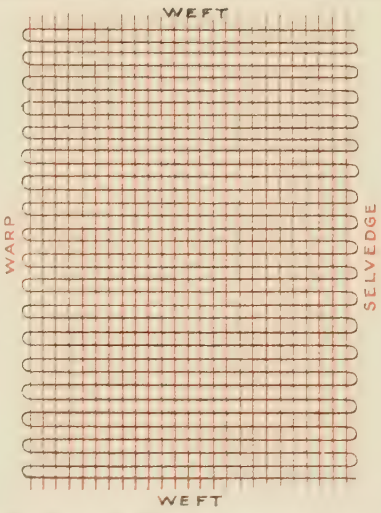
Children's Materials.—Piece of Dacca twist E. 44, or strip of coarse calico, or unprinted shirting, $5 \times 2\frac{1}{2}$ inches; needles and No. 50 coloured thread.

Note.—Stitching is so trying to the eyesight that the materials used should always be coarse in texture.

Introduction.—Show the band on the chemise, and tell the pupils they are going to learn how to make one, so as to be able to do them for the chemises they are about to make for themselves.

I. *Selvedge-way of Material.*—Ask the children to take their pieces of calico and find the *right* side, which, they should be able to tell you, is the smooth one.

II. The teacher should now take up the yard of calico and call the children's attention to the two sides which fray out, and the two which do not. Tell them that the two which do not fray out are called "selvedges", or, in the days of their grandmothers, "self-edges". Draw the following diagram on B.B., and explain that in the making of calico the weaver puts in strong perpendicular threads, 40, 60, or more yards in length. Then with his shuttle he weaves backwards and forwards or across and across without breaking his thread, and so forms the selvedge. Tell them that the threads he puts in first are called the "warp", and are very strong. Those he weaves across are the "weft". Write the three words beside the diagram—Selvedge, Warp, Weft, and get the pupils to give their meaning.



III. Tell the children that because the selvedge is strongest, the *length of the band* is always on the selvedge, because more stress is laid on the length of the band than on the depth.

IV. *How to find the Selvedge-way of Cloth.*—Explain that as selvedges are very often uneven and make a clumsy seam, we generally take them off, and that you are going to tell them an easy way to find out the selvedge-way of the cloth when the selvedge has been torn off. Ask them to take up their pieces of calico, and taking the opposite edges in right and left hands, pull them. They will find that when pulled they stretch one way, but not the other. The selvedge-way *does not stretch*, the weft-way does. When they pull selvedge-way they will also hear the cloth give a *sharp* sound, whereas the weft has a dull sound.

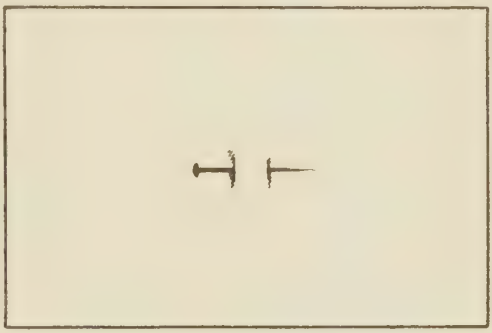


Fig. 1.

V. Ask the children to put in a pin to mark the selvedge-way and right side, as in Fig. 1.

VI. Show the children the Java band with the row of stitching on it, and draw from them that the stitching makes it look prettier or ornaments it. Impress on them that we ought to have our underclothing tidy and pretty as well as our upper and outer clothing.

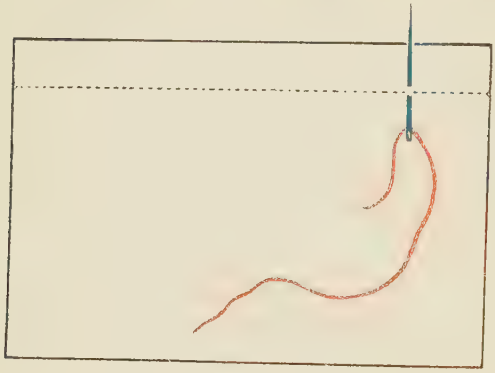


Fig. 2.

VII. Tell the children that they are about to do a row of stitching on their bands. Remind them that when infants they got lines ruled on their slates to keep their writing even, and to keep their stitching straight they are now to be taught how to draw out a thread.

VIII. With her lined paper the teacher will now show the pupils how to double their bands so as to decide the position for the stitching.

IX. The teacher takes up her Java band, or draws diagram on B.B., and shows the children how to put in their needle about $\frac{1}{4}$ inch from the folded edge and $\frac{1}{2}$ inch from the right-hand side, and lift out one of the threads. (Diagram 2.) She can also explain to them that the depth from the folded edge varies. Sometimes the row of stitching goes up the middle of the band; sometimes there are two rows made, one on each side of the band.

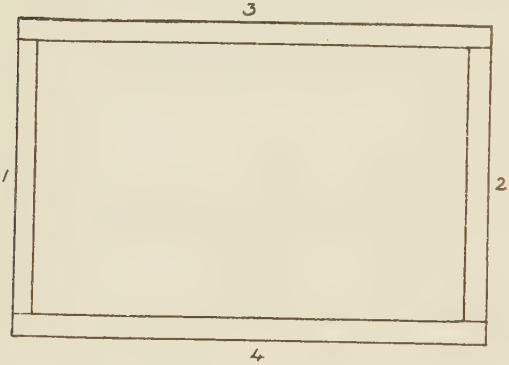


Fig. 3.

X. Now, with coloured thread on Java canvas band, show how to hold this end firmly with right thumb and forefinger, but not to pull it. Then with left thumb *above* and forefinger *below*, they scratch the band across so as to loosen this thread from the rest of the calico. Ask the children to try who will take out the thread without breaking, but at the same time show them how to pick up the thread again should it happen to break.

XI. Draw diagram of cotton on B.B. and number the sides as in Fig. 3.

XII. Tell children to open their calico, and, turning the wrong side toward them, fold down one of the short or weft sides, $\frac{1}{8}$ inch deep.

XIII. Then explain that when folding bands they must lay *opposite* sides. Show with paper band that the corners would not be flat, nor the edges go so nicely together, if they did not do so. Proceed with folding, as in Fig. 3.

XIV. Show the children, with paper band, how to baste the short ends and the folded one a short distance from the edge; then get them to seam the short ones, as in Fig. 4.

Fig. 4.

Stage III.—Stitching of Band.

Apparatus and Materials.—Same as for Stage II.

I. *Commencement of Thread.*—With stitching sheet of P.P.A. show pupils how to commence the thread, either as they did it on the canvas, or by the neater way of slipping the needle in between the folds above the line for stitching, and bringing it out close to the right-hand end of the drawn thread.

II. *Rule for Stitch.*—Get pupils to give the rule given in first lesson: "From the place where the thread comes out insert the needle two threads *behind,* and bring it out two threads *in front* in a straight line", and explain to them that the stitch is sometimes called back-stitching. Elicit from them that it gets this name because the needle is always put back for a new stitch. Three or four threads, $\frac{1}{16}$ or $\frac{1}{10}$ inch, may be substituted for "two threads behind, and two in front".

III. *Points to be attended to in Stitching.*—Impress on the pupils the necessity for (1st) not leaving any threads between the stitches, (2nd) not drawing the thread too tightly or leaving it too slack, and (3rd) remind them that if they wish the row of stitching to be strong and even they must slant the needle a little and put it in either above or below the long stitch behind, but not one time above and the next time below.

IV. *Joining-on.*—When the pupils have reached the middle of the row make them take through the needle as for a new stitch, and either darn it in and out neatly through the twill at the back or slip it in between the folds.

Get them to commence as at the beginning and proceed with their blue thread. Show them how to end off their thread, and then tell them the uses of stitching.

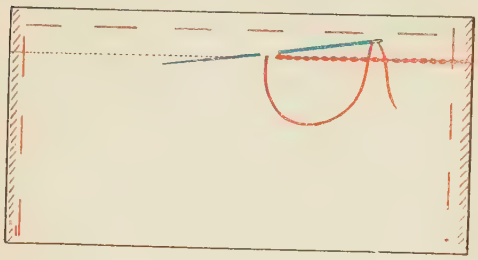


Fig. 1

V. *Uses of Stitching.*—(1) To make the work pretty or ornament it, and to make the edges of collars, wrist-bands, &c., smooth and strong. (2) To give strength to some parts of a garment, as (*a*) in sewing on buttons and tapes, (*b*) preventing the lower part of placket-holes from tearing, &c., (*c*) joining seams, &c.

VI. Examine the pupils' work and call attention to the faults noticed.

N.B.—In the Scotch Code, stitching is not now required till the pupils are in Group C, Senior Division.

HOW TO CAST ON THIRTY LOOPS,

AND KNIT WITH FOUR PINS TEN ROUNDS, BREAKING AND JOINING THE COTTON AT LEAST ONCE, AND CAST OFF.

Apparatus.—Four medium-sized knitting pins, two balls of wool of different colours, stocking, specimen of the exercise done in double Berlin wool. (Fig. 1.)

Children's Materials.—Four knitting needles, two balls of different coloured 4 or 5 ply worsted.

Introduction.—Show a stocking or the specimen exercise, and elicit from children that it was not done on two wires and then joined up the middle, but knitted with four wires. Hold up a stocking half-finished and get them to observe that the loops are cast on to three needles, the fourth needle being kept for working. Tell the children they are to cast on thirty loops, and get from them the number on each wire.

I. *Casting on of Loops.*—With two needles get the children to cast on ten loops while they repeat the casting-on drill—In, Round, Through, On—to keep them together.

II. The teacher, having done these along with the children on her own needles, when they come to the eleventh loop shows them that they must keep this loop on the right-hand needle, and allowing their first wire to drop down by the side, take up their third needle and proceed as before; *or* they must retain *both* the first and the second wires in their left hands if they place the second wire *under* the first wire with the point of the second one projecting beyond the first one. (Fig. 2.)

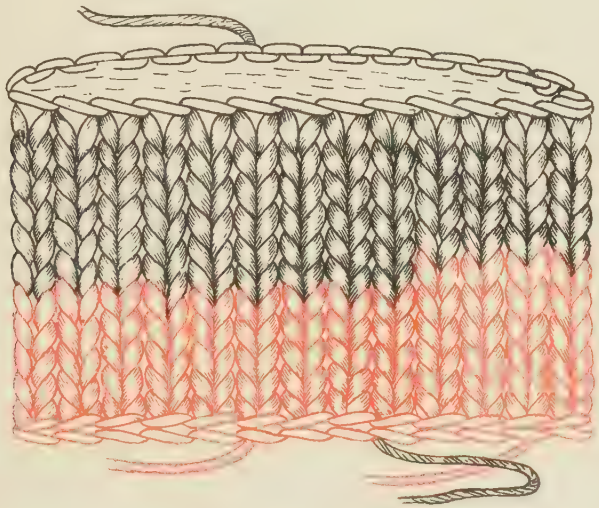


Fig. 1.

Examine the pupils' hands at this stage to see if they are holding the wires properly.

III. When twenty stitches are cast on, the children must begin their third needle as they did their second. (Fig. 2.)

IV. *How to arrange the Wires before Joining.*—After the thirty loops are cast on, the teacher must show the pupils—

1st. How to bring the three needles into the proper position for the joining, as in Fig. 3.

The teacher must be very patient at this point, and demonstrate it with her thick pins over and over again, as it is a most difficult thing for children to do with this small number of loops; twenty loops on each wire would be better. She should also have a *permanent* diagram to show to the children

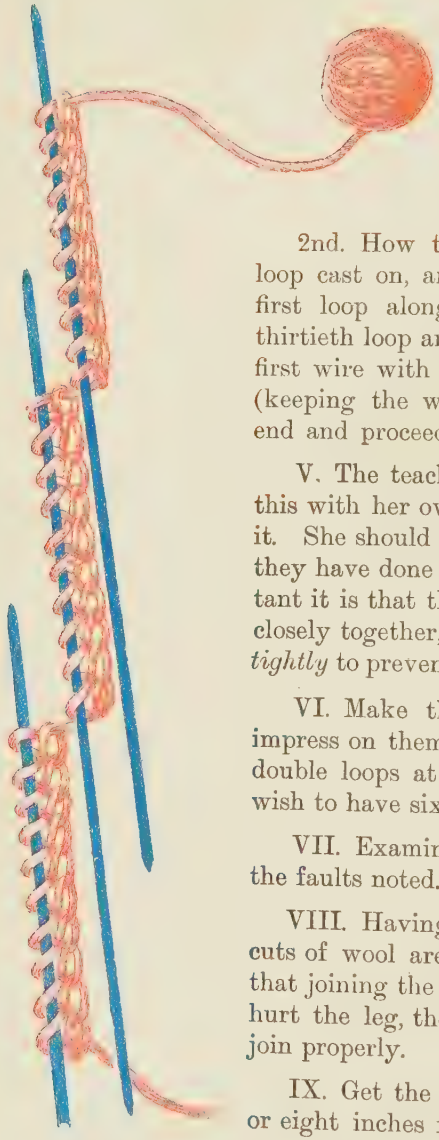


Fig. 2.

as an illustration of this point. Show them (1st) how to bring I*b* under II*a*, II*b* under III*a*, and III*b* under I*a*. Examine the pupils' work to see if the wires are properly set.

Joining on the Third Wire Loops to those on the First Wire.—

2nd. How to put the fourth needle into the first loop cast on, and (taking the short end left from the first loop along with the long end attached to the thirtieth loop and the ball) how to knit six loops off the first wire with the double wool so as to form a circle (keeping the wool in the inside), then drop the short end and proceed with the wool attached to the ball.

V. The teacher must bring out several pupils to do this with her own needles, and then ask the class to do it. She should then examine each pupil's work to see if they have done it without twisting. Show how important it is that they should draw the ends of the needles closely together, or else knit the first loop on each wire *tightly* to prevent loose loops, and so mark their stockings.

VI. Make the children knit a second round, and impress on them the necessity for knitting each of the double loops at the commencement as *one*, unless they wish to have six extra loops on.

VII. Examine the pupils' work, and then point out the faults noted.

VIII. Having drawn from the class that two or three cuts of wool are required to knit a large stocking, and that joining the wool by knotting looks ugly and might hurt the leg, the teacher will proceed to show how to join properly.

IX. Get the children to break off the wool about six or eight inches from the end. Then ask them to twist the end of the second ball three times round the little finger of the left hand, and placing the short end left

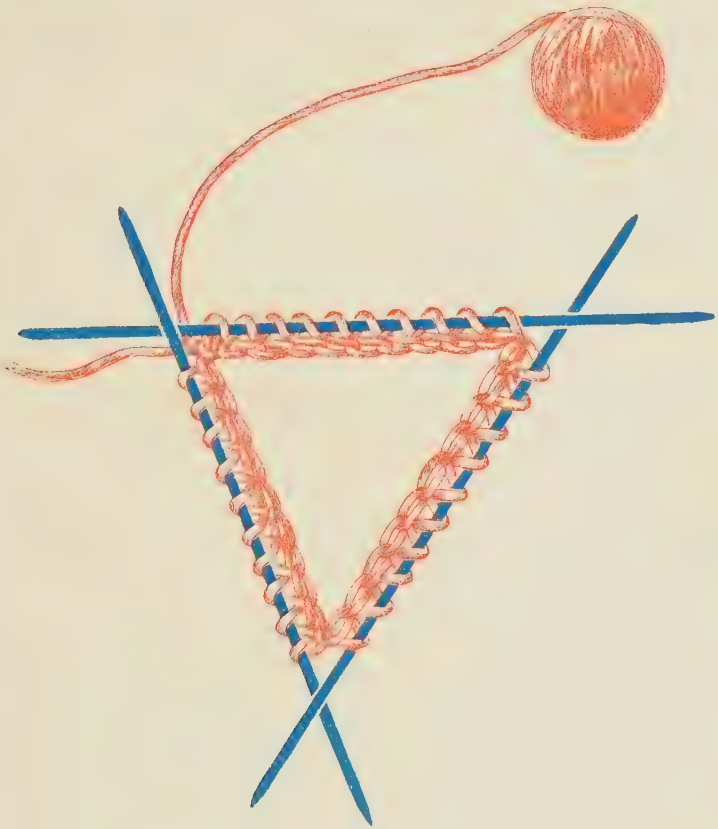


Fig. 3.

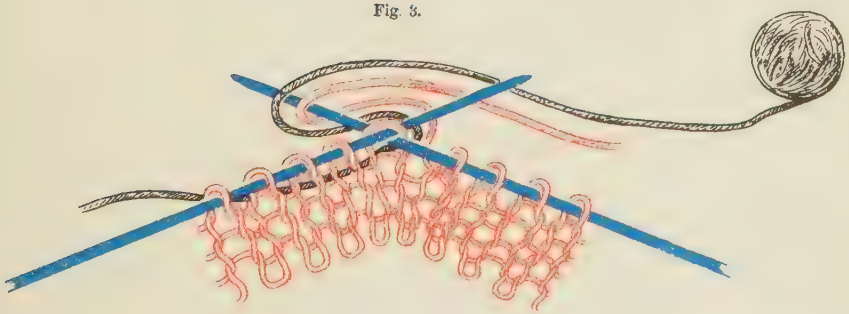


Fig. 4.

when broken off and the new worsted together, knit four or five loops with the double wool as before. (Fig. 4.) Remind the children, when doing the next row, that they must knit each double loop as a single one.

X. Make them knit other five rows and then cast off.

XI. *Darning in of the ends of Worsted.*—Tell them that the ends of wool left at the joining should be darned in a short way, and then cut off if they wish their stocking to be perfectly neat and tidy.

HERRING-BONING.—FIRST LESSON.

Apparatus.—Demonstration frame, chequered black-board, flannel garment.

Children's Materials.—Canvas samplers on which the children learned stitching, darner, and embroidery cotton.

I. Introduce the lesson by showing the children either a herring-bone, or the diagram of one (Fig. 1), along with the herring-boning on the flannel garment. Explain to the children that though the stitch is called herring-bone it has little or no resemblance to one. Show that there might be a slight resemblance if the stitches were inverted, or placed below each other, as in Fig. 2.

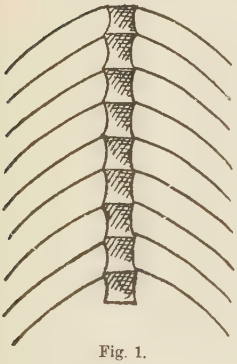


Fig. 1.

Fig. 2.

II. *Various Names the Stitch receives.*—Tell the children that the stitch is almost entirely used for fastening down one fold of flannel or other woollen material, and therefore it is called *Flannel Stitch.* But as the threads are more easily counted they are going to be taught on canvas. Rub out the middle of the herring-bone stitch, as in Diagram 4, and elicit from children that the stitches form a series of crosses above and below, and therefore it is called *Cross Stitch.*

Show the children that because the stitches are formed now above and now below, or in a zigzag manner, it is also called *Zigzag Stitch.*

III. *Commencement.*—Question the children as to which side they began stitching, hemming, &c., on. Tell them that in herring-boning they always begin at the *left-hand side* and work towards the right.

IV. Show on D.F. how to count down six threads from the top of sampler and six from left side, and bring the needle through from back to front, leaving a finger-length of thread, which is afterwards to be securely finished off.

V. *Formation of Stitch.*—Proceed now and show on the D.F. how the stitch is done, giving the pupils the following directions:—

1st. From the place where the cotton comes out count *down* four threads and four to the *right*, put in the needle *horizontally*, and take up two threads

Fig. 3.

Fig. 4.

in a straight line towards the *left*, the cotton to be always behind the needle, that is, to the right of it.

2nd. From the place where the cotton comes out count *up* four threads, and four to the *right* put in the needle *horizontally*, and take up two threads in a straight line towards the *left*, &c., as in Fig. 3.

VI. Work these two stitches on the D.F. repeatedly, while you question the pupils thus:—How many threads down do I count? How many towards the right? How many do I take up on needle? In what direction do I point the needle? &c. How many threads up do I count? &c. Where must the cotton be?

VII. Get several pupils to come out and do a stitch each. Then ask the pupils to take up their canvas samplers and do two stitches. After they have done these two examine their work, and then call their attention again to the diagram and the D.F. and show them—

1st. That the stitches are made alternately *one up* and *one down*, in *even* lines, with *four threads between.*

2nd. That the stitches form a series of little crosses, and that if there be a cross above there is an empty space below, and *vice versâ.*

VIII. *How to Hold the Work.*—Now show the children how to hold the work, by placing it over the first three fingers of left hand and holding it in position with their thumb and little finger, and tell them that they are to work from their thumb towards their little finger, and as we could not be always counting threads we have simply to notice to work the stitches in the two straight lines with the four threads between, and to bring out the needle for a new stitch *immediately opposite where it went in for the last one,* as in Fig. 3 inverted. Examine children's work while they do a row.

SECOND LESSON.

IX. *How to Turn a Corner in H.B. Stitch.*—When the children have done one side, show them how to turn a corner. Tell them that when preparing to turn a corner they must have the cotton coming from the top row, as in Fig. 5.

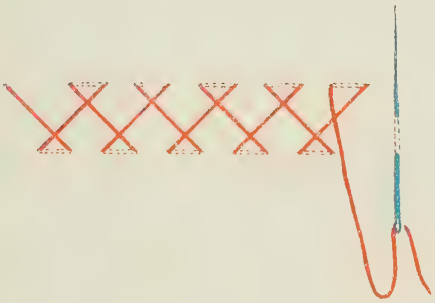


Fig. 5.

Fig. 6.

X. Draw diagram on B.B., with needle turned upwards instead of to the left, and call the attention of the children to it. (Fig. 5.)

XI. Then show the different steps on the D.F. and dictate the following:—

(1) Count as before four threads down and four to the right, put in the needle, and, *pointing upwards,* take up two threads.

(2) Turn the canvas round so that the side which was at the *right hand* becomes the *top* of the square, and proceed with another stitch as before.

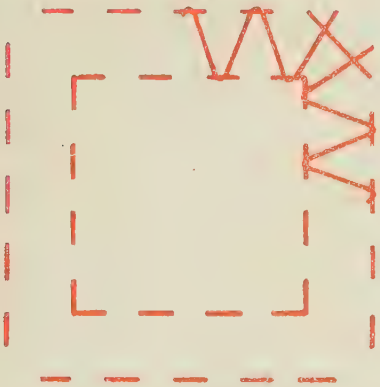


Fig. 7.

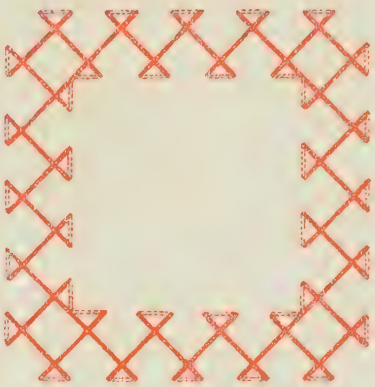


Fig. 8.

(3) If correct, the needle will come *out* in the very same space as it went *in* for the third stitch. (Fig. 6.)

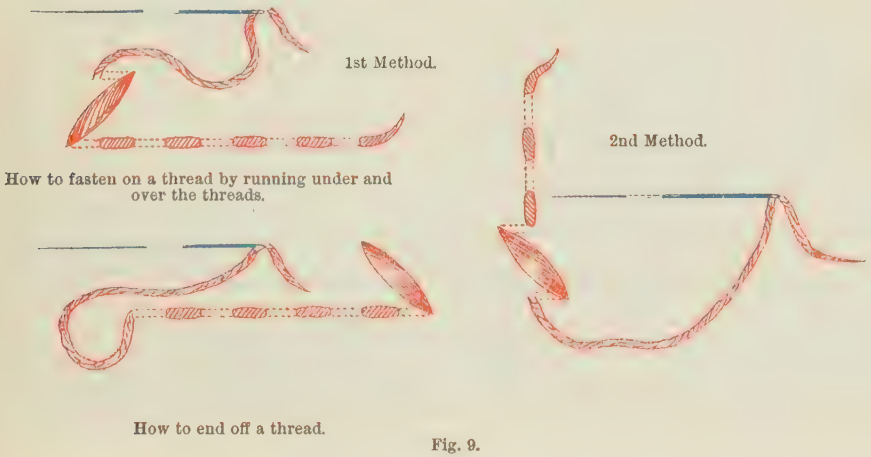


Fig. 9.

XII. *Finishing off Thread.*—Before the children finish the last corner point out to them that they must slip the needle under the first stitch made,

and put it through from the front to the back, two threads to the right of where the needle first came out. Do this on D.F. Get the children to do it. Show them how to finish off their thread by darning it in and out on the wrong side through two or three of the short straight stitches. The children must also do the same with the thread they left at the beginning, as in Fig. 7. Or fasten off and on in canvas as in flannel, thus:—1st. Count back twelve threads from the place where the first stitch is to be made. 2nd. Pick up the twelfth stitch on needle and back-stitch it. 3rd. Darn from right to left, passing over two threads and taking two, as in Fig. 9.

XIII. The children must then practise this on flannel folds.

Impress on the pupils that when working in flannel they take the stitch through the double material at the *top* and the single material at the *foot* just below the raw edge of the fold.

SEWING ON OF TAPES.

Apparatus.—White paper band 18″ × 8″, red paper tape 15″ × 3″, paper band with tape sewed on in two different ways, P.P.A., or garments with tapes, as apron, pillow-slip, &c.

Children's Materials.—Stitched band 5″ × 2½″, tape 2½″ × ½″ or ¾″, needles, No. 50 coloured thread.

Introduction.—Introduce the lesson by referring to the different ways in which clothes are fastened, or refer to the inconvenience of a tape coming off when one is in a hurry. Tell the children there are different ways in which tapes are attached to garments, but that there are two principal ways—one when the tape is placed on the right side and the other when the tape is put on the wrong side. Show on the specimen band and tapes that on the right side the tape is attached by a square the four sides of which are stitched, and on the wrong side by a square three sides of which are hemmed and the other seamed. Tell them that for the first lesson they are about to be taught how to place the tape on the wrong side of the band.

I. *Preparation of Tape.*

(1) Show by paper tape and B.B. how to turn down a narrow fold, $\frac{1}{8}$ inch in depth, along one of the narrow sides, as in Fig. 1.

(2) With the same apparatus show the children next how to place this folded short side of tape along one of its long sides, as in Fig. 2, so as to form the diagonal of a square the width of the tape.

(3) Show the children next how to raise this fold, and make a straight crease from the corner of the diagonal to the other side of the tape, the folded side of the tape to be turned from worker when doing it. (Fig. 3.)

By this means a square is formed (Fig. 4) which is to guide the children in sewing it on.

II. *How to Attach the Tape to Band.*—Call the attention of the class to

Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

the position of the tape on the specimen band, and get them to tell that the tape is placed close to one end, and in a line with the middle of the band. For first lesson both the tape and the band might be creased along the centre. Show pupils how, holding the wrong side of the band towards them, and the folded end of tape downwards, they place the short end of the *band* into the crease last made on the tape, and put in a pin or a few basting stitches to hold it firmly in its place. Examine pupils' work to see if they have placed tape properly. (Fig. 5.)

III. *How to Sew the Tape On.*—With P.P.A. show the children that they commence at right-hand foot corner of folded square, and hem along the three sides, A B C, taking particular care not to come through both folds of the

band. Show on P.P.A. that no hemming stitches are seen on the right side of the band. On P.P.A. teach them how to do the corners accurately. Tell them that when they have done their last stitch on the side marked A, in

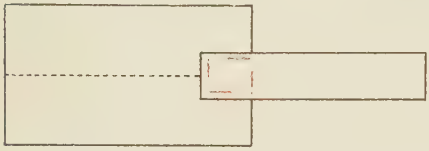


Fig. 5.

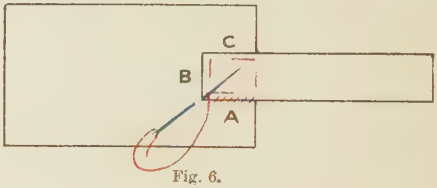


Fig. 6.

Fig. 6, they must put in the needle at the very corner of the tape, and take the needle up through the same hole as the last stitch came out at (Fig. 6), and then proceed along B and C. Show the children how to turn back the long end of tape, and seam the fourth side of the square, and finish off by slipping the needle through to the other side of the tape between the band and the tape, as in Fig. 7. If preferred the seaming might be done first.

IV. *How to Finish off the End of Tape.*—Explain to the pupils that the tape is not finished. Show that the tape would soon fray out and look untidy if it were left as it is. With paper tape show them how to turn down a hem $\frac{1}{8}$ inch in depth. On P.P.A. show them how to seam the short ends of this fold, hem the long one, and finish off by slipping the needle through the middle of this narrow hem to the other side.

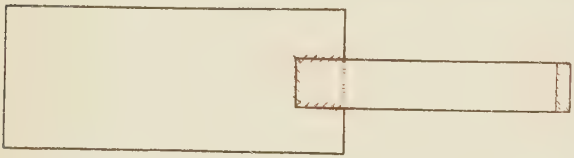


Fig. 7.—Wrong Side of Band.

V. Examine the children's work, and then make a few remarks on the chief faults seen in putting on tapes.

Chief Faults.

(1) Tape badly prepared and wrongly placed.

(2) Some stitches seen through the two folds and others not.

(3) End of tape left unhemmed, or tape carelessly sewn on.

VI. A second lesson must be given in the same manner on how to stitch on a tape, and the position of tapes, &c.

Position of Tapes.

(1) If placed on pillow-cases they are generally placed two to three inches down from the edge.

(2) If put on bands intended to overlap each other, place one at each end, and make a buttonhole about three inches from one of the ends, so that one tape may be drawn through the buttonhole and both ends lie flatly; or put one tape on the right side of the band and one on the wrong side, both close to the edge.

(3) If placed on a baby's flannel, one set of tapes is put at the *edge* of the skirt on the wrong side, and the other several inches from the other edge on the right side.

(4) Towels have loops of tape placed either at the middle of one long side, if an oblong in shape, or at the corners, if square. Show all these articles,

Fig. 8.—Tape Stitched on Right Side of Band.

so as to impress the rules firmly in the pupils' minds and to make the lesson more interesting.

HOW TO FIX HEMS OVER THE ENDS OF SEAMS.

Apparatus.—Large specimens of exercise finished on linen, calico, or Java canvas, P.P.A., two pieces paper $12'' \times 6''$ seamed together, B.B.

Children's Materials.—Two pieces calico or holland, each $5'' \times 2\frac{1}{2}''$, seamed together, needle and coloured thread.

On the preceding day the children should seam their two pieces of calico together by a sew and fell seam, as they were taught in Class II.

I. Show the specimen exercise, and get the children to tell that it consists of two pieces of calico joined together by a sew and fell seam, with a hem all round it like a handkerchief.

II. Refer to a garment having side seams and a hem at the bottom, such as chemises, night-dresses, &c. Show the children the small chemise which they are to make for themselves, and tell them this exercise is to teach them to

prepare the foot hem of it, and that the difficulty lies in folding across the seam.

III. Ask the children to take up the exercise they have seamed.

IV. *Folding of the Sides.*—Now work with the paper specimen, and show the children how to fold down one of the long selvedge sides $\frac{1}{8}$ inch deep to the drill: "Lift, Fold, Slide".

V. Remind the children of the rule given when folding the stitched band —"Fold opposite sides", and fold along with them the second long side $\frac{1}{8}$ inch deep. (Fig. 1.)

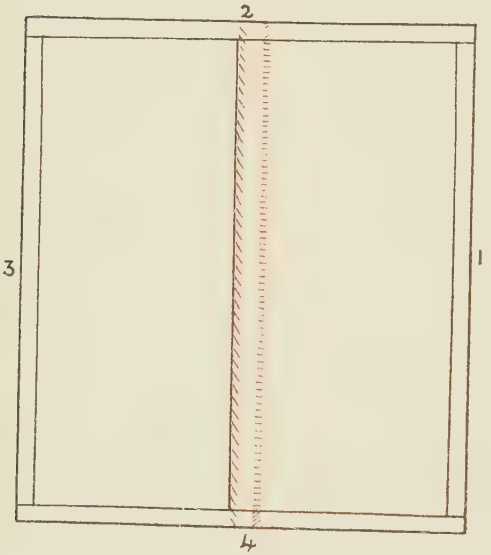


Fig. 1.

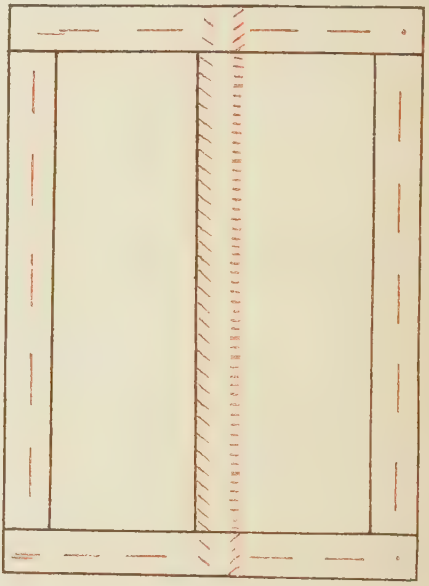


Fig. 2.

VI. Show the children now how to do the short side, and impress on them the necessity for having the rows of sewing to match when they fold this short side. Tell them that the difficulty is here because the seaming stitches on the right side must be above the seaming stitches on the wrong side, and the hemming ones on the right side above the hemming ones on the wrong side, and that they must give this part a good pinch to make it lie flat.

VII. Get the children now to lay down a fold $\frac{1}{4}$ inch on each of the long sides, and then the same on the short ends.

VIII. Baste it along with the children, beginning at the middle of one of the long sides, and make them take a back stitch at each corner and at each seam to keep them secure and make them lie flat. (Fig. 2.)

IX. With Java canvas specimen show them how to hem the sides and seam

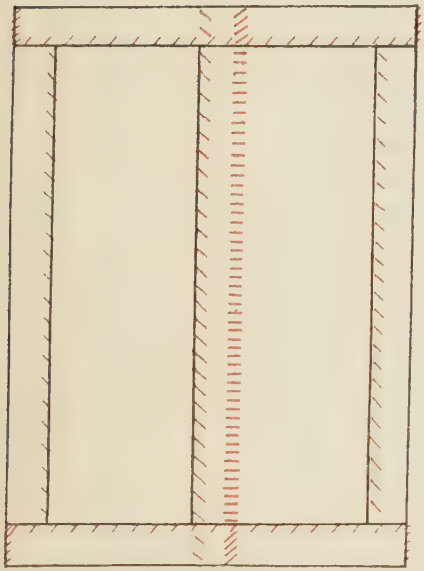


Fig. 3.—Wrong Side of Exercise.

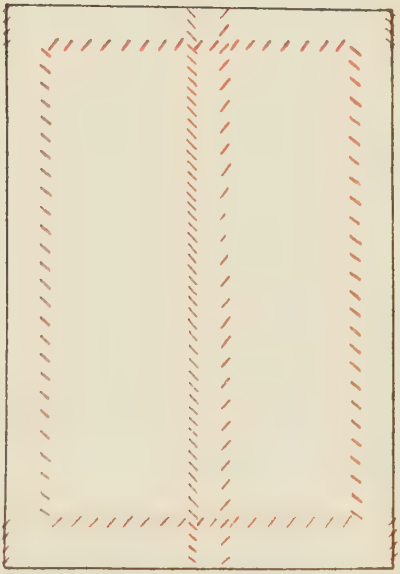


Fig. 4.—Right Side of Exercise.

up each corner neatly; then slip the needle to the next side, and proceed as before.

Note.—(*a*) If preferred, the double fold of the selvedge sides may be laid down before proceeding to the short ends, but the corners of this exercise lie flatter when they are folded by the method described above.

(*b*) This exercise does not require to be hemmed, but as it provides practice in the finishing off of corners, the children should occasionally at least complete it.

PLEATING.

Apparatus.—Piece of lined paper 36″ × 30″, pins, paper band 14″ × 6″ when finished, large card tape-line, scale 4″ to the inch, woman's apron and child's chemise to show pleats and gathers.

Children's Materials.—Piece of print 7½″ × 7″, or, for the first lesson, lined paper, band 3″ × 1″ when finished, pins, needles and suitable thread, small tape-line 4″ × 1″.

Introduce by showing the woman's apron and child's chemise, calling attention to the pleats, and point out that in both garments the extra fulness required in one place has to be confined into a narrow space in another part.

I. *Definition of Pleat.*—Write down Pleat and Plait on B.B., and show that the word may be spelled in both ways. Write down also the definition—"A pleat is a fold of cloth or a flattened gather". Show a garment having its fulness confined by gathering, and contrast it with one pleated. Draw a diagram on B.B., and show the difference between pleating and gathering. (Figs. 1 and 2.)

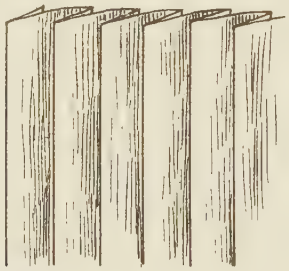


Fig. 1.—Pleating.

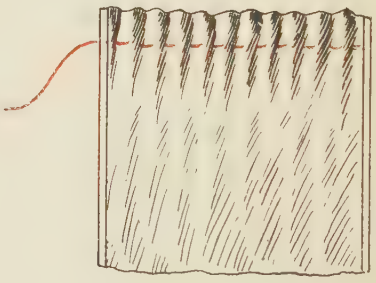


Fig. 2.—Gathering.

Tell pupils that flannel, wincey, and woollen stuffs are generally pleated, calico usually gathered.

Point out that pleating is not very suitable for garments requiring ironing, because the pleats, being closed at the top, do not admit the smoothing iron very well.

II. *Proportion of Material to Band.*—Tell the pupils that the proportion of the material to the length of the band varies, but from two to three times is the rule usually given.

III. *Width of Pleats.*—Show garments with different widths of pleats, and show that they vary from $\frac{3}{8}$ inch to $1\frac{1}{2}$ or even 2 inches. Tell the children that they must be regular in size, although the size sometimes varies at *different parts* of the same garment. Show from a child's frock that the pleats at the neck are smaller than those at the waist.

IV. *Preparation of the Material.*—Ask pupils to take up their pieces of print, and tell them that they are going to make a miniature apron. Get them to find the selvedge-way, and if the print be flowered tell them to put in the pin so that the flowers will be growing upwards. Ask them to lay a fold $\frac{1}{8}$ inch deep down the two sides, and another along the foot about $\frac{1}{2}$ inch in depth. These are afterwards to be hemmed.

V. *Measurement of Pleats.*—With lined paper show the children how to make a crease down the centre of the garment, or mark it with a small pin. Tell the pupils that tucks or pleats are generally made on the right side of the material, that they are laid along the *weft* way of the cloth, and that they are arranged on both right and left hand sides so as to face either *towards* the centre or *away from it.*

Show the apron, and tell the children they are to fold their pleats *towards* the centre, three on each side, and that they are all to be of the same width, namely, $\frac{1}{4}$ inch. The space between each pleat is to be $\frac{1}{8}$ inch.

First Pleats.—With tape-line and lined paper show the children how to measure from the centre crease $\frac{1}{2}$ inch, $\frac{3}{4}$ inch, and 1 inch; or $\frac{3}{4}$ inch, and then $\frac{1}{4}$ inch on each side of the $\frac{3}{4}$ inch. Show them how to make a neat crease at the $\frac{3}{4}$-inch mark, so that the pleat or fold will be $\frac{1}{4}$ inch wide. Draw a diagram on the B.B. to illustrate this, and then get the pupils to do the first pleat on each side of the centre crease.

Second Pleats.—Show them how to measure $\frac{5}{8}$ inch and $\frac{7}{8}$ inch on each side of the 1-inch mark, and fold these down by the $\frac{5}{8}$-inch mark. Elicit from the pupils why they measure $\frac{5}{8}$ inch instead of $\frac{1}{2}$ inch from the mark last made.

Third Pleats.—Demonstrate clearly to the children how to measure $\frac{5}{8}$ inch and $\frac{7}{8}$ inch on the left and right of the $\frac{7}{8}$-inch mark of the second pleats, and again fold by the $\frac{5}{8}$-inch one.

Get children to measure the width of the apron at top now, and elicit that it has been made narrower by 3 inches. Make them put a small pin through

each pleat (Fig. 3) as they fold it down, and when all are finished get them to baste them firmly down $\frac{1}{4}$ inch from the top edge, and then remove the pins.

VI. *Insertion of Garment into Band.*—Ask the children to take up the band which they made at a previous lesson, and insert the apron *between the folds*, so that the short ends of the band will be in a line with the sides of the apron, and the centre of the band to the centre of the apron.

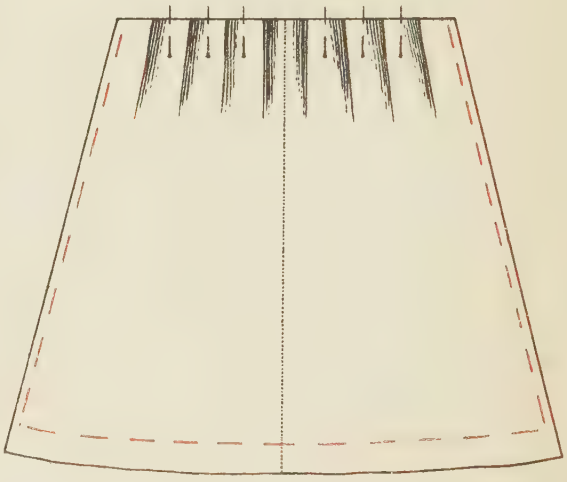


Fig. 3.

(*a*) *Right Side.*—Demonstrate clearly how to set the pleated portions into the band, so that the under half of the pleats is not pulled out of place. Get them to pin the band to each pleat, so that the edge of the band shall rest on the tacking stitches which were put in to secure the pleats, and then tack it. Show the children how to hem it on neatly on the right side.

(*b*) *Wrong Side.*—Having finished the *right* side of the apron, make the pupils turn to the *wrong* side, and get them to place the under side of the band to the apron. Impress on the children that if they are not very careful in preparing this under side the band will likely be puckered or twisted, and then it will have to be done over again. Show them that the edge of the band on this side must just rest *on*, but never *below*, the stitches coming through from the right side, and that the edges of the pleats must be flat.

VII. *Tapes.*—To complete the garment, and for practice get pupils to affix tapes to each end. (Fig. 4.)

Note.—If lined paper be used, the lesson might be made easier by making the space between each pleat $\frac{1}{4}$ inch instead of $\frac{1}{8}$ inch.

N.B. (*a*) Single pleats are chiefly used for chemises, aprons, petticoats; *double* or box *pleats* are employed at the foot of the front folds of shirts, &c.

(*b*) The *spaces* between pleats should always be *regular*.

(*c*) If pleats face towards the centre of the garment, the fulness is meant

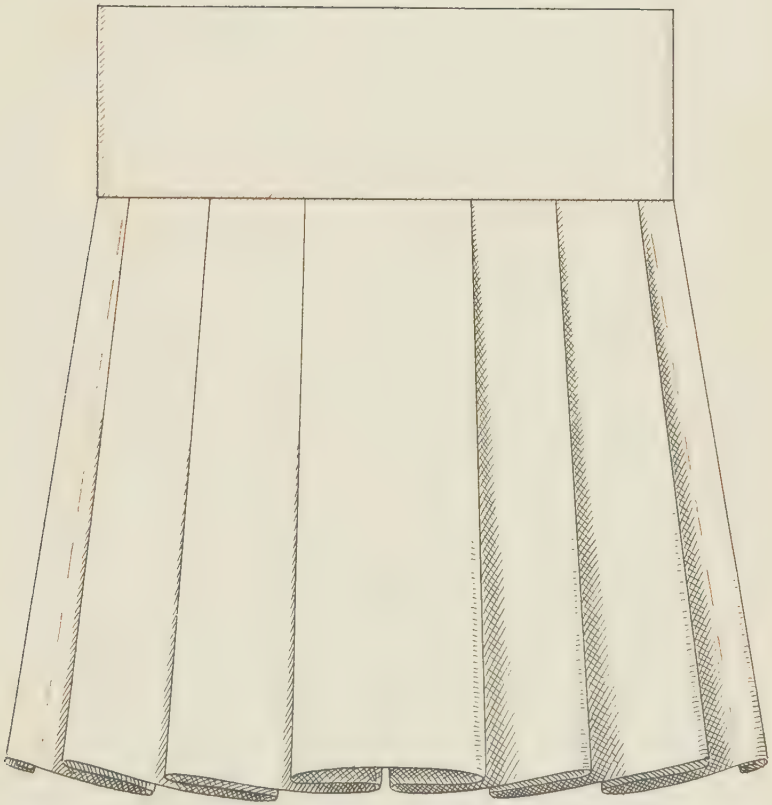


Fig 5.

Fig 6.

Three methods of doing the following exercise:— "To make a band

m page 65).

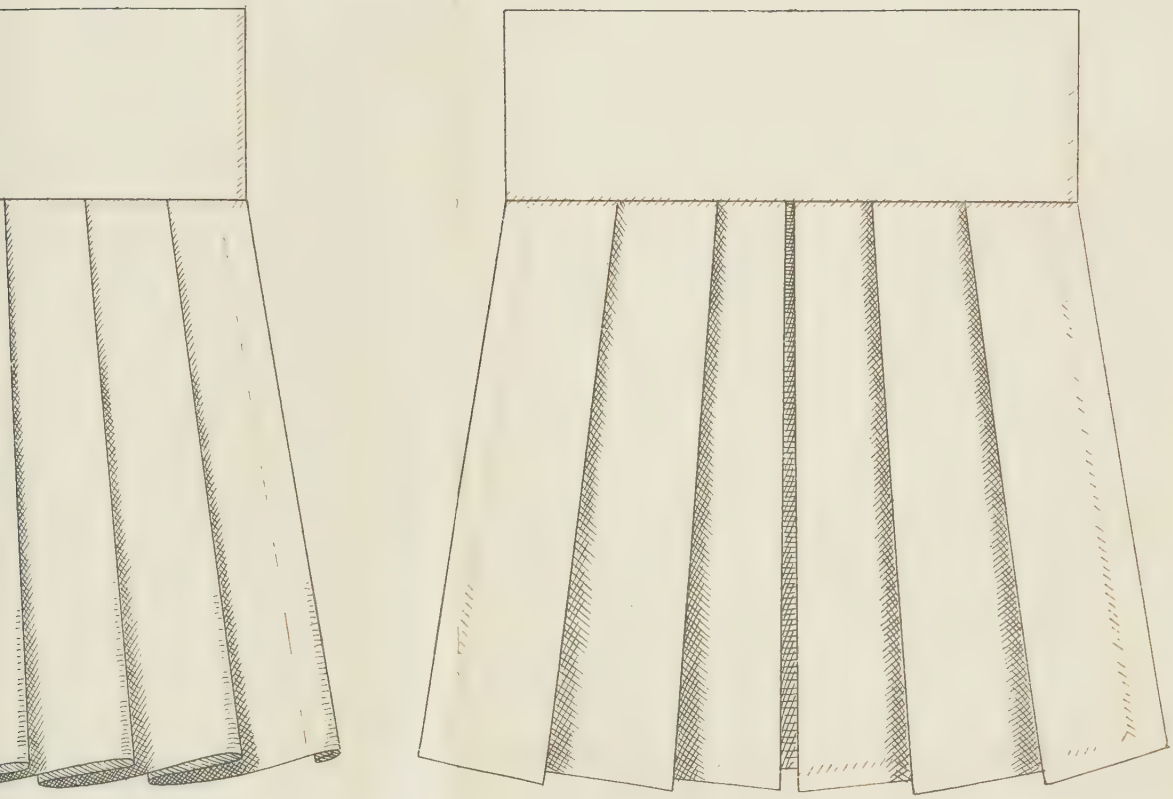
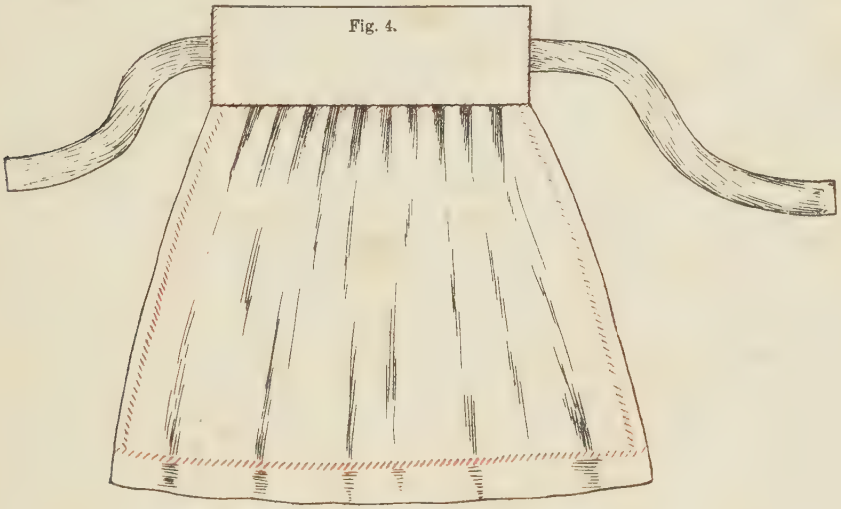


Fig 7.

f calico 3″ long, and to pleat into it a piece of calico 9″ in length."

to be *in front*; if they fall towards the back-opening, the fulness is intended for the back and sides of the garment.

Fig. 4.



Apron with Ten Pleats.

(*d*) The rule for the proportion of *garment to band in specimens* is from *2 to 3 times the length* of that part of the band into which the pleats are to be inserted. But the proportion varies according to the width of the pleats required and the kind of garment on which they are used.

(*e*) Pleats are almost invariably used in flannel garments, and all *paper* garments *must be pleated*, as gathering is impossible on that material. A graduated card or stiff paper tapeline, 4 or 5 inches by 1, will be found invaluable in pleating. (See also Plate Ia.)

GATHERING, STROKING, AND SETTING IN TO A BAND.

Preparation of Band.—As the making of the band was taught in Class III. the pupils require simply to be asked to make the band out of the square of calico supplied, and seam the short ends. If preferred, leave about ¼ inch of each end unseamed to keep the wrong side of the band out of the way when the gathers are being set in on the right side. The gathering, stroking, and setting in will require at least six lessons, two or more being required for each stage.

Stage I.—Gathering.

Apparatus.—Chemise, night-dress, or shirt with gathers about them, Demonstration Frame, gathering sheet of P.P.A., or piece of coarse twilled linen with scarlet cord, and B.B.

Materials.—Piece of soft calico 7″ × 3″ to represent garment, band, needle, pink and blue thread, darner or rug needle, pins.

I. *Introduce* the lesson by showing pupils the garments. Call their

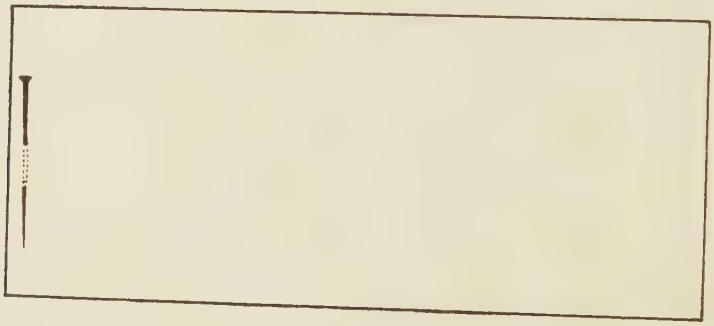


Fig. 1.

attention to the fact that certain parts of garments require to be loose in order to allow the limbs free play and give freedom and gracefulness to the body, while other parts require to be tight-fitting; *e.g.* a full sleeve gives room for the play of the arm, a skirt room for the movements of the legs, but the fulness of the sleeve has to be drawn close to fit the wristband, and that of the skirt to fit the waistband. Show the children that the larger part might be fitted to the small part by pleating, as they did in Class III., but if they wish the garments to have a nice smooth appearance when ironed they must use this new stitch now to be taught, viz., Gathering.

II. *Definition of Gather.*—Write the word "Gather" on B.B., and get its ordinary meaning "to collect or bring together into one mass"; therefore a plait, fold, or tuck in cloth made by drawing.

III. *Selvedge-way of Cloth.*—Ask the children to take up their piece of cloth and find the right side and selvedge-way. Remind them that in a band

the selvedge-way went round the garment, but that in the skirt of a garment it runs up and down. Draw Fig. 1 on B.B. to represent cloth, with pin placed perpendicularly to mark these two points, right side and selvedge-way.

IV. Call attention to the raw edges, and tell the children that to make their work neat and tidy they must lay folds along the short edges $\frac{1}{8}$ inch in depth and tack them; these may afterwards be hemmed. Draw diagram on B.B. to show depth of folds.

V. *Division into Halves and Quarters.*—With band and skirt of P.P.A. show the children how to find the centre and quarters of each, and, having creased

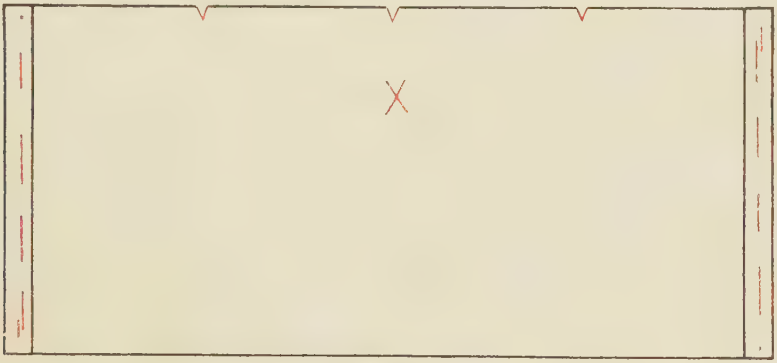


Fig. 2.

them, mark them with a small cross in pink thread, or make a small notch. Explain that this must be done to ensure that the fulness be set in regularly. Get children to do this, and then place their garments beside the bands on desk. (Fig. 2.)

VI. *Proportion of Material to Band.*—Call the children's attention to the comparative lengths of their bands and garments, and get them to tell that their garments are double the width of their bands. Tell them that the rule for the proportion of the band to the material gathered is that the band should be half the length of the material. But make them observe that

(1) A little more material makes the gathers prettier, and

(2) In making garments we may sometimes have less material than that given in the general rule, and in that case the gathers will not look so well.

VII. *Rules to be observed in Gathering.*—Write down the following rules on B.B., and ask the pupils to put them in their sewing note-book, and repeat them simultaneously:—

(1) Gather on right side of garment.

(2) Gather the weft way of the stuff, that is across the garment from selvedge to selvedge, about ¼ inch from the edge.

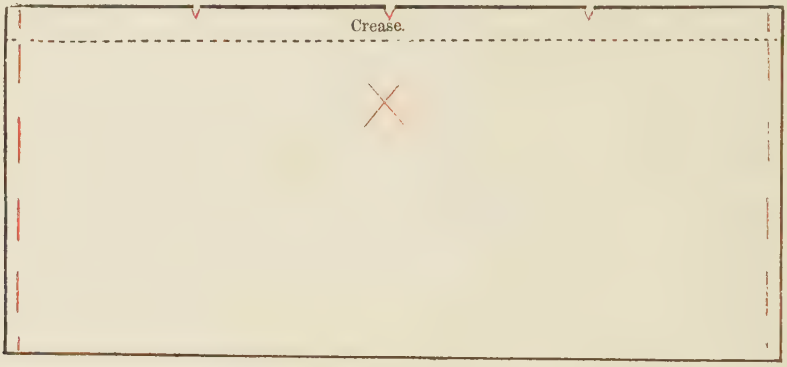


Fig. 3.

(3) Gather on single material. Explain here that gathering may sometimes be done on double material, as a muslin pinafore, back of underskirt, &c.

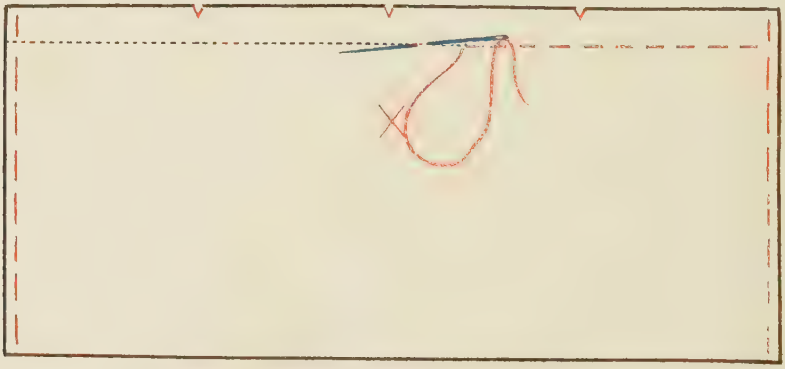


Fig. 4*a*.

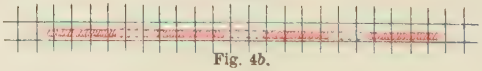


Fig. 4*b*.

VIII. *Distance from Edge.*—Ask the children to lift their garment, and holding the right side towards them, turn down a fold about ¼ inch from top of the edge (Fig. 3), which they must turn up again. This will leave an even

crease for the children to run. Show that this is necessary in order that the gathering may be in a straight line. Remind them of the thread they drew out for stitching, and explain that they must not do this in gathering, as it weakens the fabric too much.

IX. *Rule for Gathering Stitch.*—Do a few gathering stitches on D.F., taking up two threads on needle and passing over four. (Fig. 4.) Get a few children to come out to do some stitches, and then elicit from them that they take up on needle exactly one-half of what they pass over. Therefore, on fine material, as muslin, they might take three or four threads, in which case they will pass over six or eight threads. But, as in every other stitch, insist that they do not count threads after the first few stitches, but gauge the distance with the eye.

X. *Commencement of Thread.*—Show on P.P.A., or coarse specimen, how to commence without a knot by bringing the needle through two threads of the material, and drawing the cotton through till ½ inch remains, then taking the same two threads again and drawing up till a small loop remains, catch the ½ inch left through this loop and tighten it. Then take another small back-stitch and proceed.

XI. Now do a few stitches on P.P.A., then get the pupils to go on with their own pieces whilst you examine their work, and impress on them the general rule: "Lift a small piece of the material and pass over twice as much, so that there is a small stitch on the wrong side and a long one on the right". See Fig. 4, which should be drawn on chequered B.B.

XII. Here the class must be told that if a long piece had to be gathered they might have to take one or more threads to gather it, in which case they must begin at the half and quarters of the material.

XIII. Ask the children to tell you any difference between their gathering thread and that they are to sew with; they will tell you it is rounder. Show them that this is necessary lest they should break it. Then tell them that people sometimes use double thread for this purpose, but it is apt to get twisted and entangled when it breaks.

XIV. Examine the pupils' work and point out the chief faults which you have noticed.

(1) Gathering line too near or too far from the edge.
(2) Irregular stitches, some long, some short.
(3) Knots for a commencement.

Stage II.—Stroking of Gathers.

I. *Preparation for Stroking.*—When the gathering is finished show with P.P.A. how to draw up the gathering-thread. Explain that every gather should be pulled up by the forefinger and thumb, and that it depends greatly on how this thread is drawn up whether the gathers are likely to be easy to stroke or not.

When the thread is drawn up, show the children how to put in a pin upwards at left-hand side, exactly at the end of the gathering-thread, and how to twist the thread round it. (Fig. 5.)

Fig. 5.

II. Now show on P.P.A. how to set the gathers in a nice position by holding the top of the garment in the left hand, and pulling it down with the right. This will slacken the thread, and allow the gathers to be more tightly drawn together. They must, therefore, remove the small pin, and setting it in again twist the thread round it as before.

III. *Stroking.*—Write "stroking" and "striking" on B. B. Elicit the meanings by referring to the difference between *stroking* and *striking* a cat.

IV. Impress on the children that they are to stroke their work. Tell them it has to be done on the right-hand side of work, and that they always stroke from the left-hand side towards the right-hand side.

Show the children with P.P.A. how to hold the material between the left thumb and forefinger, so that a few gathers are at the tip of the finger, and the thumb immediately below the gathering-thread. Ask them to lift their darners or long steel pins, and hold them between the right-hand thumb and

forefinger. Show them how to lay their needles flatly into the groove between the first and second gathers, and lifting the first gather gently place it under the left thumb, and press it down firmly. Impress on them the necessity for lifting every gather. (Fig. 6.)

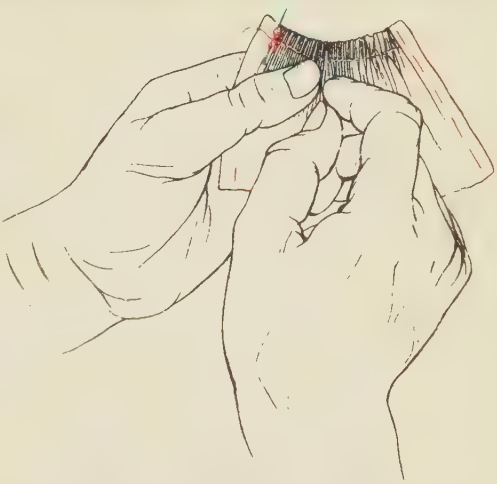


Fig. 6.

V. Draw diagram on B.B. showing the depth to which they are to stroke the gathers, viz., $\frac{1}{2}$ to $\frac{5}{8}$ inch. (Fig. 7.)

VI. Examine the work carefully, and point out why some of the children have scratched their work. Tell them if they scratch it the material will be torn, and that a good sempstress never makes any noise when stroking.

Remind them that the work will be more easily placed and more easily "set in" if the gathers are stroked above as well as below the gathering-thread.

Fig 7.

Stage III.—Setting-in of Gathers.

I. *Insertion of the Gathered Cloth into the Band.*—After the stroking is finished ask the children to remove the pin holding the gathering-thread, and loosen out the gathers to about the length of the band.

II. Show the children with P.P.A. or coarse linen specimen how to pin the two ends of the band to the ends of the garment so that they are in a straight line, and arranging the gathers evenly, twist the gathering-thread anew round the pin at the left hand. Then pin the middle of the band to the middle of the gathers as in diagram. (Fig. 8.)

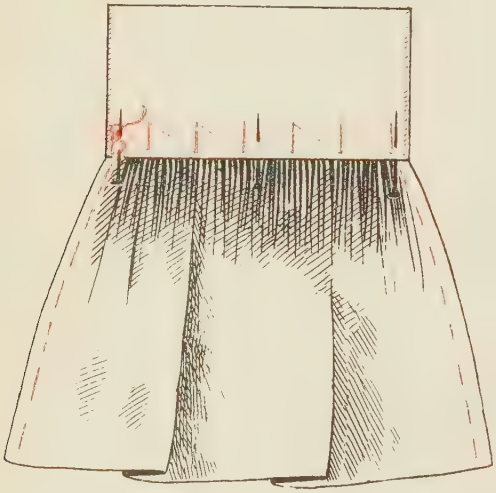


Fig. 8.

III. As this exercise is a short one, the children will not require to baste or tack it, but as they sometimes require to baste, show them how to do it on the P.P.A. by a short upright stitch on the right side and a long slanting one on the wrong side. (Fig. 8.)

IV. *How to Hold the Work.*—Show the children how to hold their work for this stitch, either as for hemming (Fig. 9*c*), or better at an angle of 30° with the left thumb, holding the band in place, while the left forefinger, being under the material, lies along about a half inch of the gathers. (Fig. 9.)

V. *Setting-in Stitch.*—Show the children now how to commence as for hemming. Then demonstrate how, placing their needle through the first gather parallel to the gathering-thread, but two threads of the material beneath it, they pull the eye downwards, and turn the needle so that it

points to that part of the band at which the stitch is to enter. That is, they place the needle first in a horizontal position and then in a slanting one, as for hemming. (Diagrams *a* and *b*, Fig. 9.)

If properly done, the upright stitches (or slightly slanting if there are few gathers) will fall into the grooves between the gathers.

VI. On coming to the end, tell the children to seam the small portion of the band (if left undone at the beginning), and finish off neatly both it and the gathering-thread.

VII. *Wrong Side.*—Proceed with P.P.A. to show the children how to fix the band on the wrong side. Impress on them the necessity for not twisting or puckering it. Tell them that the lower edge of it should be one thread above the gathering-thread, but never below it, so that the setting-in stitches may not be seen on the right side, nor the gathers on the right side be displaced. Ask them to proceed with the wrong side as they did with the right, and when finished to remove the small crosses, pins, &c.

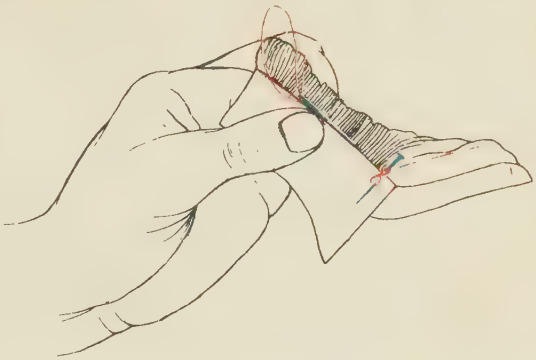


Fig. 9*a*.—Setting in First Position.

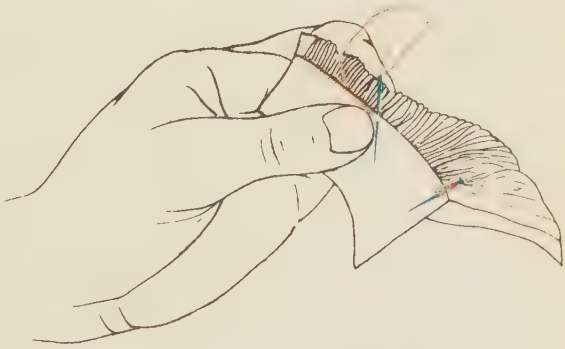


Fig. 9*b*.—Setting in Second Position.

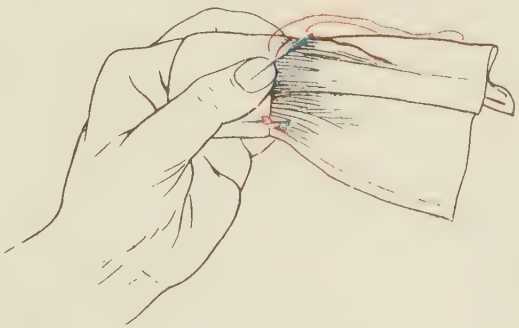


Fig. 9*c*.—Work held for Hemming.

VIII. Examine the children's work, and comment on the faults seen.
(1) Gathers not evenly distributed along the band.
(2) Hemming stitches used for setting-in.

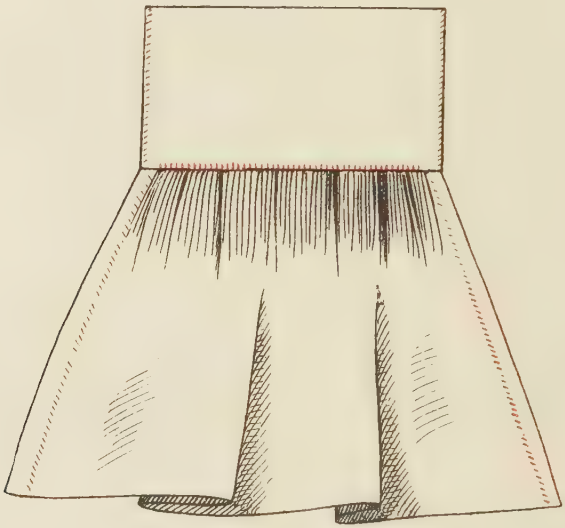


Fig. 10.—Exercise when Finished.

(3) Stitches from wrong side showing through on right.
(4) Bands twisted from being carelessly fixed.
(5) Corners untidy, and ends of thread left.

N.B.—If bands are basted along the centre, children will be less likely to pucker and twist them when doing this exercise, or when putting on bands to garments.

DECREASINGS ON THE LEG OF A STOCKING.

Apparatus.—Large specimen of Decreasings finished in 12-ply fleecy wool (Fig. 1), diagram of stocking, medium-sized pins, and double Berlin wool, B.B., &c., stocking.

Materials.—Two knitting-needles and ball of 4 or 5-ply worsted.

Introduce the lesson by showing either a stocking or the diagram of one; question pupils as to the names given to the various parts of the stocking—calf, ankle, &c. Show that since the leg gets gradually

narrower as it gets nearer the ankle, we must find some means of making the stocking narrower also. Tell the children this is done by means of "Decreasings", or "Intakes", or "Narrowings".

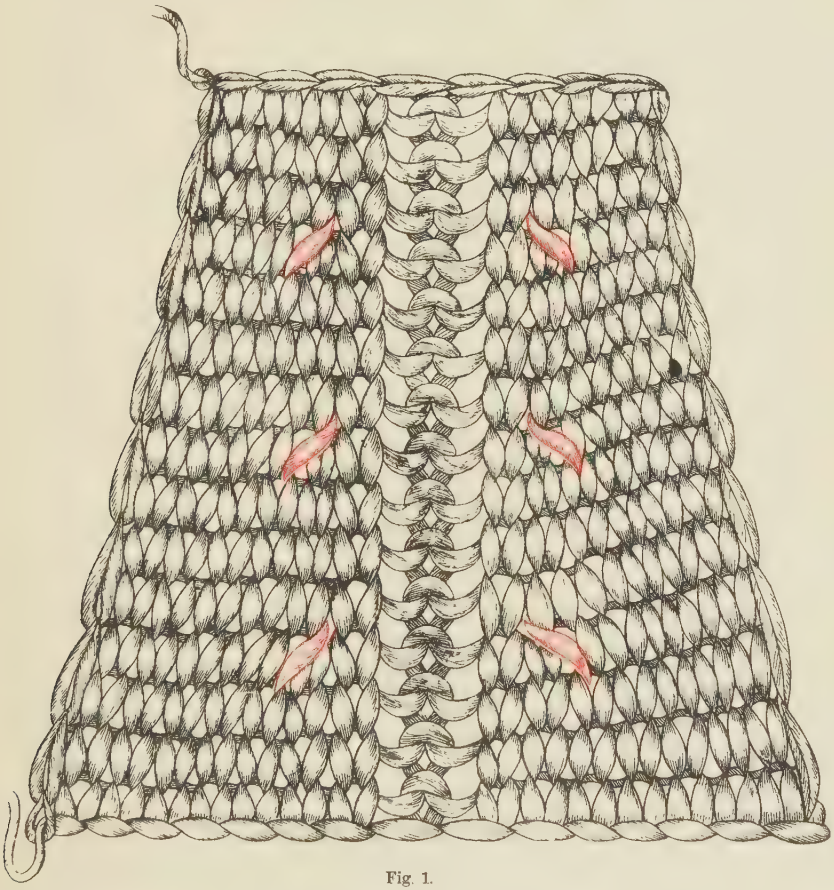


Fig. 1.

I. Tell class that they are not going to knit a stocking, but only a small piece to include the decreasings. Show the coloured specimen, and tell the children that their exercise is to be exactly the same, only smaller because their needles and wool are finer.

II. Ask the pupils to cast on fifteen loops on their knitting-needles, while the teacher does the same, and knits one row plain. Explain that in doing

this exercise we always cast on an odd number of loops so as to have an equal number on each side of the seam stitch.

III. When the children turn, explain to them that as they are only using two needles they must purl the second row.

IV. Call attention to the slipping of the first loop in every row so as to have it chain-edged. Make the children repeat the drill—In to the front, Round, Through, Off,—for seven loops, then ask them how the seam loop must be done in this row, and get them to finish the row.

The teacher must see that the class keep together in this exercise. She need not ask them to say the knitting-pin drill except for the first seven loops on the first and second rows, but at the end of each row she must insist on each pupil waiting till all are finished.

V. After the pupils have done five rows in this way the teacher must show, from the specimen, that the decreasings are done in pairs, two in one row, and one on each side of the seam. Impress on the children that they always decrease when doing the plain rows. Show them that the decreasings are both to incline towards the seam, and tell them that this is done by working the decreasings in two different ways.

VI. Get class to knit four loops. Then tell the children to slip the fifth loop unknitted, knit the sixth, and pull the fifth or unknitted loop over the sixth. Show the children how to do this. Get two pupils to come out and demonstrate it on the teacher's pins, and then allow the class to do it. Ask the class to knit the stitch left before the seam and the seam stitch, and show that as they left one loop between the decreasing and the seam, they must knit one loop before decreasing again. Explain that the loops on each side of the seam are left to prevent the heavy double loop dragging the seam out of place. Draw Figs. 2 and 3 on B.B., and show that if they were to decrease again in the same manner the children's work would look like Fig. 2. To make both the decreasings incline towards the seam (Fig. 3) they must make the second decreasing by knitting two loops together. Demonstrate this.

Fig. 2.

Fig. 3.

VII. When this is done get the children to finish the row and count the

loops, when they will find 13. Ask them to tell how many have been lost. They have decreased by 2 loops. Draw Fig. 4 on B.B., or better, have a *permanent enlarged* one, and show to the pupils.

VIII. Explain that the children must knit a few rows (say five) before

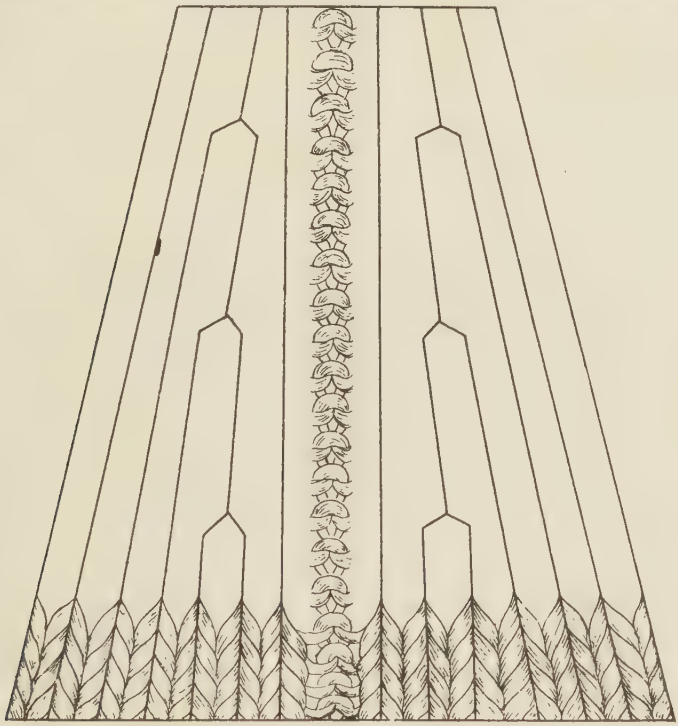


Fig. 4.

they decrease again, in order that the stocking may be more shapely. The number of rows between the decreasings in one stocking may vary.

IX. When the children have decreased three times, with five rows between, and knitted other five, they will then cast off.

X. A few rules with regard to the decreasings should then be written on the B.B.

Rule I. Length of stocking from the casting on to the first intake should be about $1\frac{1}{3}$ times the length of the foot.

II. Number of decreasings to be made should equal the number of loops cast on divided by 8; *e.g.* $96 \div 8 = 12$.

III. Length of stocking from the first to the last intake should be about $\frac{2}{3}$ the length of the foot. Refer to the diagram or stocking.

Question the girls to see if they understand these rules, and then make them commit them to memory

---

DECREASINGS ON THE LEG OF A STOCKING WITH *FOUR* NEEDLES

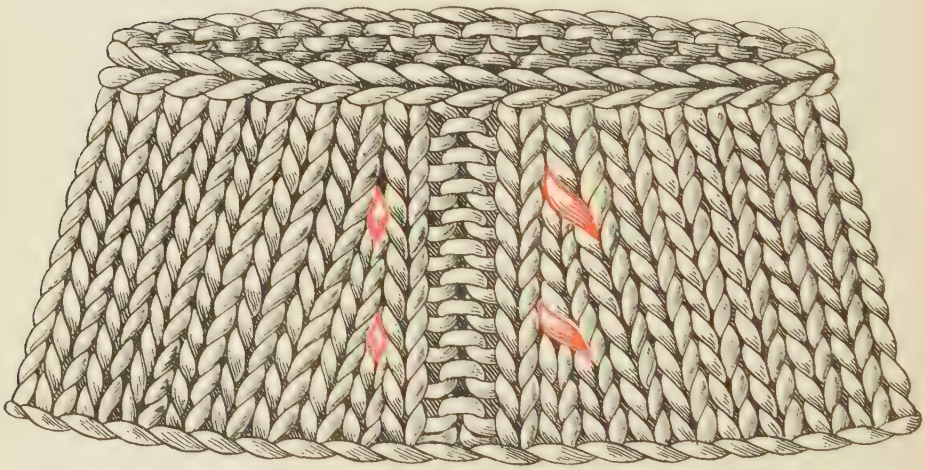


Fig. 1.

Tell children they are to learn now how to knit *decreasings* with *four* needles, just as they would do when knitting a stocking. Show children a knitted specimen of the exercise they are to do. (See Fig. 1.)

Casting on of thirty-seven loops. 1st Wire.—Ask pupils to make a *slip-knot* and cast on twelve loops. The drill—In, Over, Through, On—might be chanted by the girls to keep them together.

2nd Wire.—After they have knitted twelve loops, ask them to knit the thirteenth loop, but instead of taking it *on* the *1st* wire keep it on the 2nd

one. Remind the girls that they must place this 2nd wire *in front* of their 1st wire: that is, they must keep *both wires* in the left hand—the 2nd wire being *nearest the chest.*

Get pupils to take up the 3rd wire and cast on thirteen loops on the 2nd wire, the extra loop being for the *seam* stitch.

3rd Wire.—Knit the fourteenth loop and see that they keep it on the 3rd wire. Get pupils to take up 4th wire and knit twelve loops on to the 3rd wire.

Joining.—See that each pupil joins properly by knitting the first four loops of the *first* loop needle with *double* worsted. Question as to the necessity for this.

Seam Stitch.—Get pupils to knit *all* the loops off the 1st wire and *six* off the 2nd. Remind them that in order to keep the decreasings *even* they must make a *seam* in their exercise. Tell them the seam can be done in various ways, but they will do it by always *purling* the *middle* loop on the 2nd knitting needle. Tell them to continue knitting in this way till they reach the *seam loop needle* in the *fourth* round of knitting. See that they knit the first loop of each needle *tightly* to avoid *ladders.* Explain and demonstrate this.

1st Decreasing.—Ask pupils how many loops they will have to knit on this wire before decreasing. Question them as to (*a*) the *two* different methods of decreasing, (*b*) the decreasings *being in pairs*, and (*c*) their falling *towards* the seam in consequence of this.

Get them to knit the 4th, 5th, 6th, and 7th rows.

2nd Decreasing.—Tell them to *repeat the decreasings* on the 8th row, and knit out the 9th and 10th rows.

Casting off.—Question them about casting off. Remind them that they must cast off *loosely but firmly.* Also tell them that in order to bridge the gap between the first and last stitches of the casting off, they should pick up the first stitch as a loop, knit it, draw the worsted through the remaining loop, and cut or break off.

HOW TO DARN A THIN PLACE IN STOCKING WEB.

Apparatus.—Specimens of an octagonal and a square darn done in 12-ply fleecy wool (the square one to be done *without loops*, the web to be crimson or dark blue, and the darning thread white), stocking with darn done on it, diagrams of right and wrong sides of knitting, web of P.P.A., or ½ yard square of knitting done in 12-ply crimson fleecy wool, special darning needle 12 or 15 inches long, 12-ply fleecy worsted or thick cord.

Children's Materials.—Small piece of stocking web or waste knitting 3 inches square, darner, and pink embroidery cotton or angola worsted.

I. *Introduction.*—Refer to pupils sometimes seeing the nail of their great toe shining through stocking. Ask what pupils should do in such a case, and why? Remind them of the first principle in darning, given in Class III., "Never wait for a hole", and get the three reasons for darning a thin place. 1st. It saves time. 2nd. It saves temper. 3rd. It looks neater.

II. *Formation of the Stocking Web.*—Call the attention of the pupils to the Stocking Web. Show pupils a web of it, or part of a web. Draw from them that it is exactly like their stockings except in colour and material, but that it is woven by machinery, while their stockings are generally woven by hand.

The teacher must now make the pupils understand the formation and appearance of stocking web before going on to the darn. To do so show the diagrams representing the right and wrong sides of a stocking. (Figs. 1 and 2.)

Right Side.—Show from the diagram that the loops on the right side (unless the material be stretched) are arranged in a series of upright columns. (Fig. 1.)

Appearance of the Wrong Side.—(1) Call attention now to the diagram of the wrong side (Fig. 2), and show that the loops in one *column* are curved

upwards, away from the worker, while those of the *column* on either side have a *downward* curve, towards the worker.

(2) Get several pupils to come and point out both on the diagram and P.P.A. a column of upward-curved loops and downward-curved, till they can distinguish them thoroughly. Point out also that across or round the material the loops lie in ridge-like rows, and get pupils to point these out.

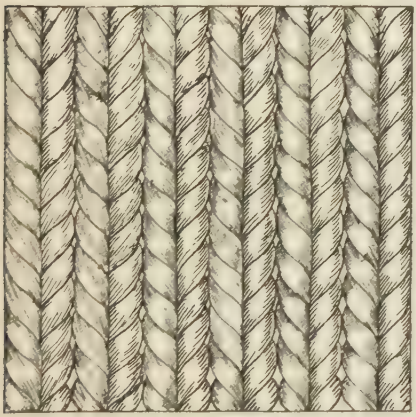


Fig. 1.

Fig. 2.

III. *Holding of Work.*—Tell the children that the darn has to be done on the wrong side of the material or stocking, with the upward and downward curved loops running from top to bottom, and the ridge-like rows going from left to right. Remind them that, as in Class III., they hold the stocking web over the first and second fingers of the left hand. The fingers must be slightly apart, and the work must be kept in place by the thumb and third finger. Examine to see if the pupils' work and hands are being held properly.

IV. *Commencement of Thread.*—Tell the children to commence about one inch from the left-hand side, and one inch from the foot on one of the *upward*-curved lines.

V. *Working of Darn.*

(a) Up Row.—Show on P.P.A., web, or piece of coarse knitting attached to frame, how to insert the needle under one of the upward curved loops and over one until five loops are taken up. See Fig. 3, which might be drawn on B.B., or the teacher might have a *permanent* diagram of it. Get one or two

pupils to do this row on the P.P.A., and then ask the class to do it on their own material. Impress on them that when drawing the needle and wool out they must put the left thumb on the web to prevent puckering the darn.

(*b*) *Down Row.*—From the diagram and their former lesson get the children to tell that they work towards the right: that the next row of loops is curved downwards; and show them that they do not miss any rows between, because the web is so elastic that when it is stretched there is plenty of space left for the new darning material.

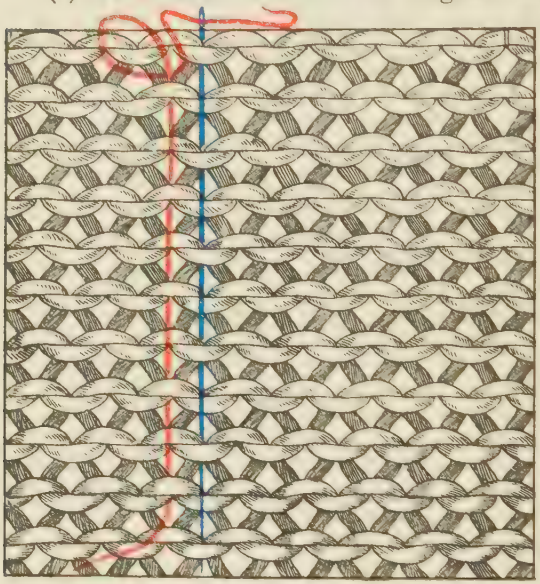


Fig. 3

Show that the needle is to be inserted in the first loop *curved downwards immediately above where the thread left the first row* (Fig. 3), so that the rows of loops may be covered alternately on the right and wrong sides. Examine the pupils' work to see if these two rows have been done accurately.

VI. *Shape of Darn.*—Do this row on the P.P.A. web, and taking one and missing one until six loops are on the needles, and explain why they are increasing. Call the attention of the children to the octagonal darn and the square one. Remind them of the rule in darning: "Avoid a straight edge".

Show from the square darn that, as the whole weight of the darn rests on the top and bottom rows, the surrounding cloth will be torn from the darned part and holes made. Tell the pupils that the shape may vary according to the position of the worn part, just as it varied in Class III.

VII. *Loops.*—Tell the children that the length of the loop to be left at the end of each row should be about the depth of two rows of knitting, or rather less than ¼ inch. Impress on the children anew the reason for leaving loops. Illustrate this by reminding them that their mothers often put their stockings on to stocking-boards, after they are washed, to preserve the shape and prevent

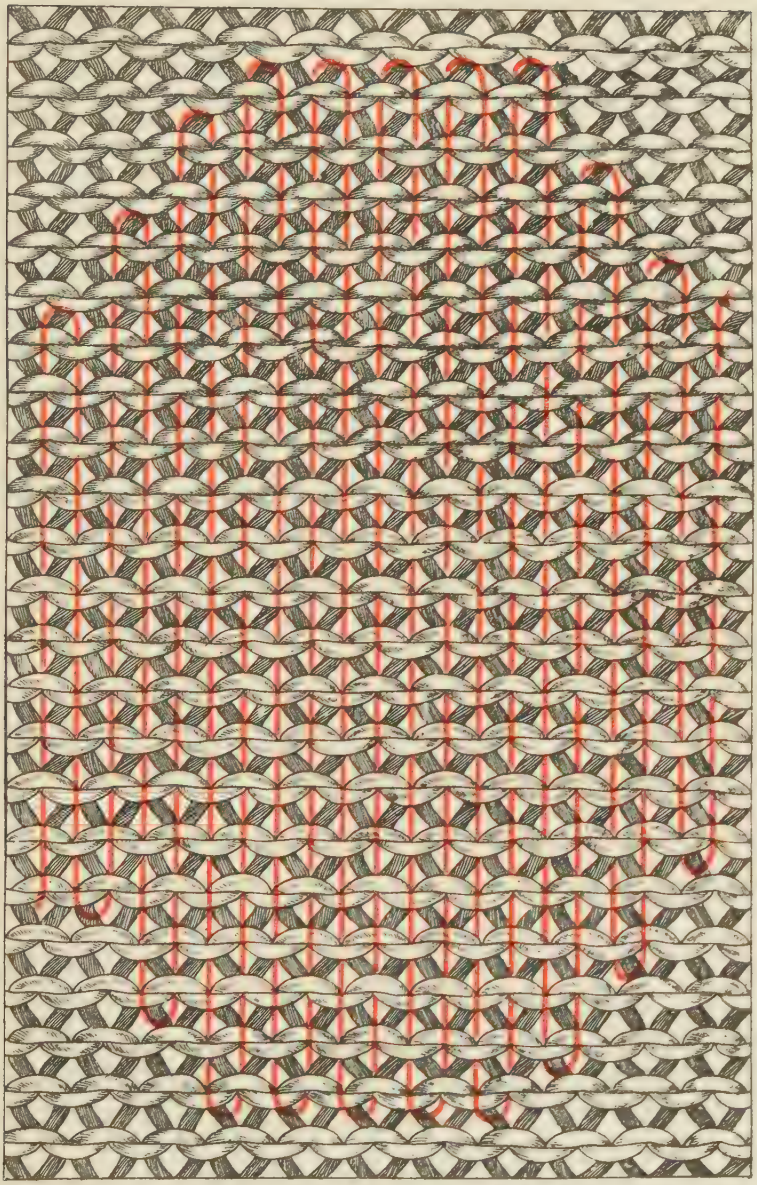


Fig. 4.

them from shrinking. Pull the ends of the square darn to show that if no loops were left the new wool would shrink, and the part darned would contract and pull itself away from the rest of the stocking.

Work on P.P.A. along with the children till there are eleven loops taken up, and impress on them that the *third* row corresponds to the *first*, and the *fourth* to the *second*, only they are longer.

Now show the children that they are to work a few rows (say seven) without decreasing, therefore the eighth, tenth, and twelfth rows will be the same as the sixth; and the ninth, eleventh, thirteenth the same as the seventh. Work these along with them on P.P.A. When they have formed these five sides of the octagon they must decrease to form the other three, or until they have the same number of loops as they had at the beginning.

Faults.—Examine the pupils' work, and then comment on the faults seen.

(1) The thread pulled too tightly and the work puckered.
(2) Loops too long or too short.
(3) Neglecting to keep the rows parallel, and so making a twill darn.

Note.—(*a*) The first lesson might be given in the form of a square till the pupils get accustomed to the new material.

(*b*) After the first two lessons each pupil might be provided with an eight-inch square of stocking web, which after being bound with tape might be covered with darns of various shapes.

(*c*) When the square is finished they should be encouraged to darn the heels and toes of the stockings or socks they have to show the inspector.

(*d*) *Coarse* web should be used for *practice*, *medium* for *specimens*.

FLANNEL PATCHING.

Apparatus.—Specimen of patches in various stages of preparation, large paper garment 24 inches square and patch 18 inches square, flannel patch of Patent Paragon Apparatus, torn flannel garment and a patched one, children's materials.

Children's Appliances and Materials.—Scissors suspended by tape or chain from work apron, two pieces of flannel 4 inches and 3 inches respectively, small pins, needles, and suitable thread.

Note.—The pupils are supposed to have practised herring-boning on flannel strips before this lesson is given.

Introduce by referring to the darning of a thin place in flannel in Class III., and tell the pupils they are now to be taught how to mend a hole in the same material; or show the two garments and contrast their appearance.

I. *Preparation of Patch.*—Call the attention of the children to the two pieces of flannel before them. Tell them that throughout the lesson the larger piece is to be called the garment, and the smaller, the patch, as it would be inconvenient to bring a petticoat or vest for each pupil. Ask the pupils to see that the patch is cut evenly to a thread.

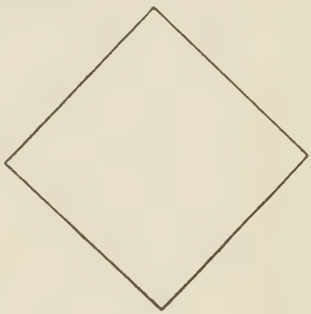


Fig. 1.

II. *Hole.*—Remind the children that before patching there must be a hole, or at least a thin place, in the garment, and therefore they are to cut out a hole in their garments. Ask them to take up their garments, and, holding them in the left hand by a corner in the form of a diamond, lift the foot corner with thumb and forefinger of right hand, so as to form a triangle. (Figs. 1 and 2.) Get the children to fold this triangle again by putting the two corners of its base together, and so making a new apex (Fig. 3*a*), which apex has to be cut across $\frac{1}{2}$ inch from the point (Fig. 3*b*). The teacher must do each step of this before the pupils with her paper patch, and draw diagrams on the B.B., and show them that if properly cut the hole will be in the form of a square. Explain *apex* if necessary.

Fig. 2.

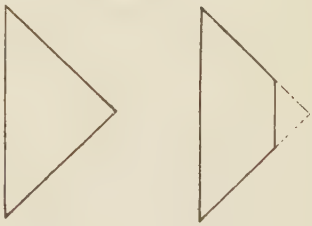


Fig. 3*a*. Fig 3*b*.

III. *Right Side.*—1. Now ask the children to find the right side of the garment. Point out to them that whereas in calico the hairy side was the wrong side of the material, in flannel it is the very opposite, the woolly side being the right one.

Selvedge-way.—2. Get the children to find the selvedge-way. Tell them the selvedge is easily recognized on flannel when torn, as the selvedge threads do not form so deep a fringe when torn as the weft ones. Show by a piece of flannel.

How the Nap must fall.—3. The teacher with a piece of flannel next calls

the attention of the pupils to the numerous woolly points, gives the children the names applied to it, viz. "nap" or "ply", and tells them that in every garment the *nap must fall* beneath the hand *from the top to the foot*, that is from the neck or waistbands to the bottom hems. Give the two reasons for this. (*a*) The material wears longer. (*b*) It keeps cleaner longer than when the nap is turned upwards.

4. Compare this nap to the fur of the cat, and remind the children that if they stroke the back of a cat from the head towards the tail the fur will fall down gently beneath the hand, whereas, if they draw the hand up from the tail to the head, the fur will rise up against the hand. Tell them it is just the same in flannel. Ask them to place their garments on the palms of their left hands, with the right side upwards and the selvedge running from the tips of the fingers towards the wrists. Make them draw their forefinger along the flannel, from the finger-tips to the wrists, and if the nap falls gently under it, put in a pin with the head towards the finger-tips and the point towards the wrist. If not, then *vice versâ*. See Fig. 4, which should be drawn on B.B. as well as illustrated on the lined paper. Examine the children's work to see if they have marked these three points properly.

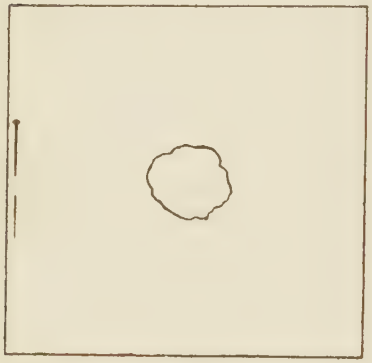


Fig. 4.

IV. Having done so, make the children lay the garments on the desk, with the right side *downwards*. The teacher will pin up her garment on the B.B. in the same way. Get them to take up their patch and find these three points:

(1) The right side,

(2) The selvedge-way,

(3) The way the nap falls,

and put in a pin *exactly in the centre* to mark them. A tacking-thread might be used instead of a pin. Remind the children that no folds are required in flannel, and get the reason why.

V. Show the children, with paper patch, how to place and pin their patches above the garments, the right side downwards, the pin in the centre of the hole, and the sides running even to a thread. (Fig. 5.) Here explain to them the necessity for having the patch larger than the hole, so that the thin worn

parts around the hole may be covered also, as otherwise the garment would soon break away from the sides of the patch.

VI. *Basting on of Patch.*—Show the children how to baste it firmly on,

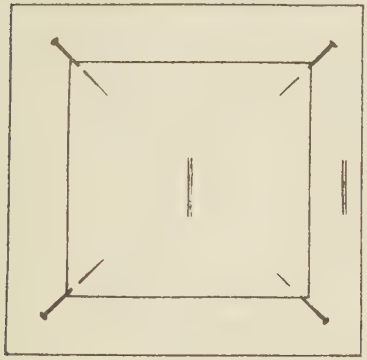


Fig. 5.

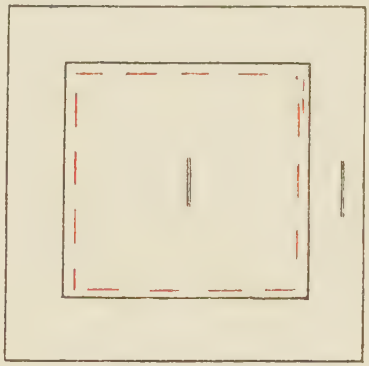


Fig. 6.

two or six threads from the edge, beginning at the right-hand top corner and removing the pins as they come to them. (Fig. 6.) Impress on the children the necessity for tacking carefully, *beginning with a selvedge side*, as these basting threads have to guide them for cutting out on the right side.

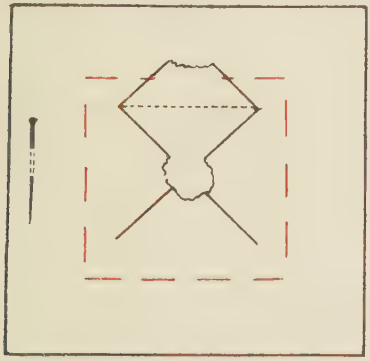


Fig. 7.

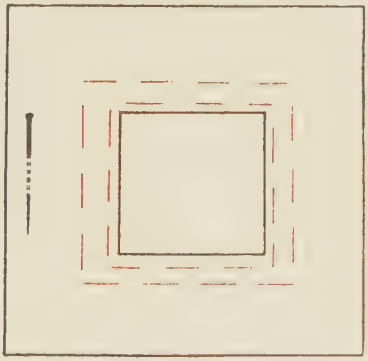


Fig. 8.

VII. *Cutting off the Worn Parts.*—Ask the children now to turn to the right side, and show them, with paper patch, how to cut the thin worn parts away. Diagrams on B.B. will assist the pupils at this stage. From the little hole already cut, show them how to place the scissors and cut the garment

towards the corners till they are $\frac{5}{8}$ inch from each corner. (Fig. 7.) Then cut away, by a thread, all the thin pieces, so that the hole will again be square, as in Fig. 8, and get the children to baste it as before.

VIII. Examine the pupils' work and call attention to the faults:—

(1) Putting on a patch without first having a hole, which is very unpractical.

(2) Patch and garment not agreeing as regards (*a*) Right and wrong sides, (*b*) Selvedge way, and (*c*) The way the nap falls. If they do not agree in these points the patch must be puckered.

(3) Patch fixed unevenly.

(4) Too much or too little material cut away, so that the requisite amount of material, namely, at least four threads, is not left between the two rows of herring-boning.

HERRING-BONING OF PATCH.

IX. Tell the children they are now to sew it on with the stitch they learnt for flannel in Class III.

How to Herring-bone the Small or Inside Square.—Ask the children to turn to the right side of the patch, as they are to do the inner square first to prevent puckering. At the same time explain that many prefer to do the outer one first. With P.P.A. show the children that they are to begin at the *left top corner.* Ask the rule for herring-boning. Having got it, show the children how to draw out the needle for the first stitch, four threads up from the corner and two threads to the left, leaving about $\frac{1}{2}$ inch to be tucked or run in between the folds. Then get them to count four threads down and four to the right, insert the needle and take up two towards the left, which will bring the needle out *exactly in the corner* and immediately *under the edge of the garment.* (Fig. 9.)

X. Ask the children to do the first side *without counting threads*, being careful (1) to see that the cross on the top is exactly opposite the space below, (2) to regulate the size of the stitches towards the end of the row, so as to insert the needle for the last stitch exactly in the corner, and bring it out two threads towards the left.

How to Turn the Corner of the Square.—Do another up-stitch, then turn round work so that the right-hand side becomes the top, and proceed as before, when the corner is sure to come right by the first lower stitch coming right

into the corner. See Fig. 9, which should be drawn on B.B. On coming to the last corner show the children with P.P.A. or coarse flannel specimen that they must slip the needle under the first stitch done in the square, and so complete the stitch. Take the needle through between the folds, or darn it out and in for three stitches and cut off. Ask the children to turn to the outer square.

How to Herring-bone the Larger or Outer Square.—With P.P.A., or coarse flannel specimen, show the children that they must commence at the *left-hand foot corner,* and insert their needle four threads up and four across; *i.e.* four

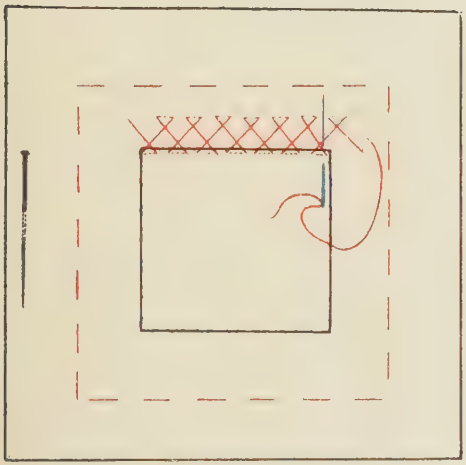


Fig. 9.

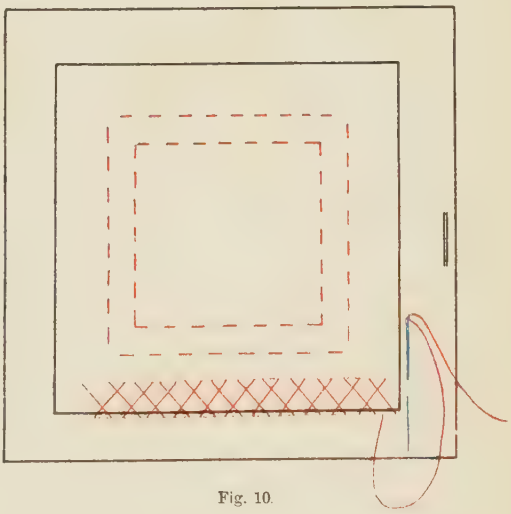


Fig. 10.

threads each way from the edge of the patch. Illustrate on B.B. Proceed as before with herring-boning till they come to the corner, when they must see that the needle for the last stitch is inserted two threads from the right foot corner, and brought out four threads from it. Then go up four, and across four, and take two down. See Fig. 10, which might be drawn on B.B. Turn work and proceed as usual, the same rule holding as in the corner of the inside square, viz., that the last stitch of the one row and the first of another must meet so as to form a little square. Show the children that if this be not done the corners will not be sufficiently strong.

XI. Explain also that in doing the *inner* square the four threads inclosed by the herring-boning must all come off *the garment,* while in doing the *outer*

square the four threads must come off *the patch.* Show the children how to finish off the last corner as before. For further details see page 285.

XII. Then examine the pupils' work, and comment on the faults observed in the herring-boning.

(1) One or more of the threads inclosed by the herring-boning being taken off the patch in the inner square, and *vice versâ.*

(2) Corners inaccurately done.

(3) Herring-bone stitches too tightly done.

(4) Stitches not showing quite clearly on the reverse side.

XIII. Make a few remarks on flannel patching.

(1) Old flannel should be used to patch with, or if new must be used it should be washed beforehand to prevent shrinking afterwards.

(2) The shape of the patch must correspond with that of the hole. If the

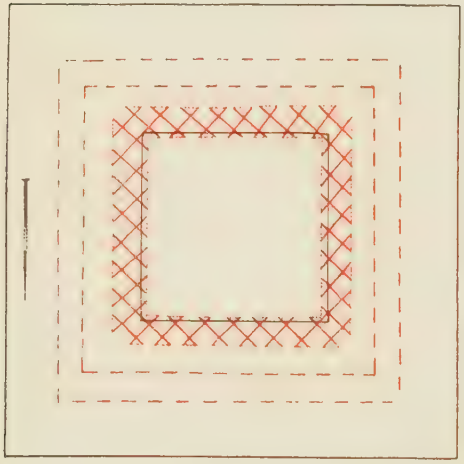


Fig 11.—Patch Completed—Right Side.

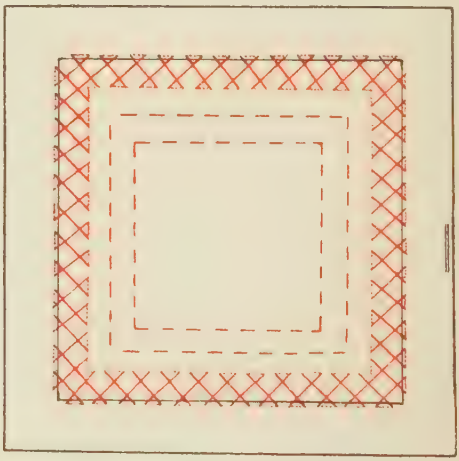
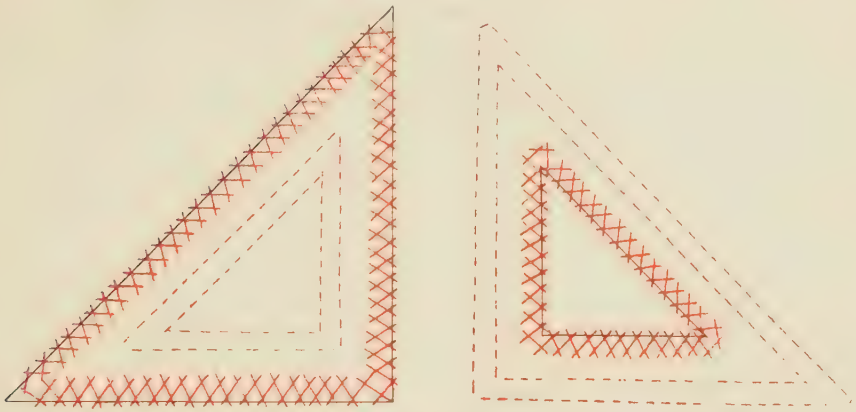


Fig. 12.—Patch Completed—Wrong Side.

hole be left circular, oblong, or triangular, then the patch must be so also, and the shape will vary with the position of the patch.

(3) Mending yarn, or fine Shetland wool, is best for herring-boning flannel.



Wrong Side. Triangular Flannel Patch. Right Side.

FIRST LESSON IN CUTTING-OUT.—A SQUARE AND TRIANGLE.

Apparatus.—Chequered cutting-out board, coloured chalks, square and triangle in extension paper, sheet of tissue paper 12″ × 8″, several pairs of scissors, set of children's materials.

Children's Appliances.—Scissors, pencil, flat ruler, measuring-tape, sheet of sectional paper, ink-eraser.

The teacher must first arrange her class as conveniently as she can, and see that each pupil is supplied with the necessary materials, &c., and with scissors suspended at her side.

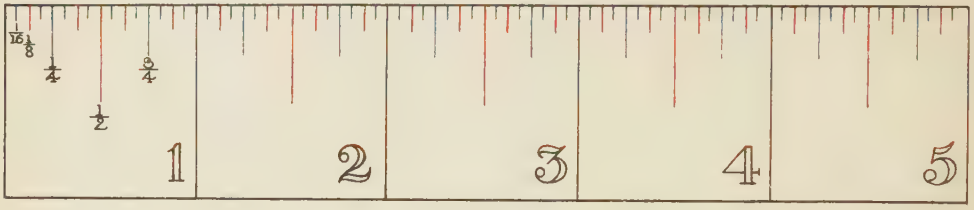
Introduce by referring to the necessity for having our garments well-shaped, and the aid which the children might give their mothers, and even their teachers, if they were able to cut out nicely.

Appliances.—Call the children's attention to the various materials and implements before them.

(*a*) *Scissors.*—Point out the necessity for having these large, because they make a nicer cut than a small pair, and also save time. Show the children how to hold the rounded end of the scissors downwards under the cloth and the sharp point upwards.

Impress on them the necessity for making a long cut, instead of snip, snipping all the time. Show them how to make long cuts.

(*b*) *Measuring-Tapes and Rulers.*—Refer to the dressmaker measuring the children for a new dress with a tape-line. Make a model tape-line on the



B.B., putting in the divisions with different coloured chalks. Show the relative lengths of each fractional part: 1″, $\frac{1}{2}$″, $\frac{1}{4}$″, $\frac{1}{8}$″, $\frac{1}{16}$″. Tell them they may also use a ruler for short lengths and measuring on the flat.

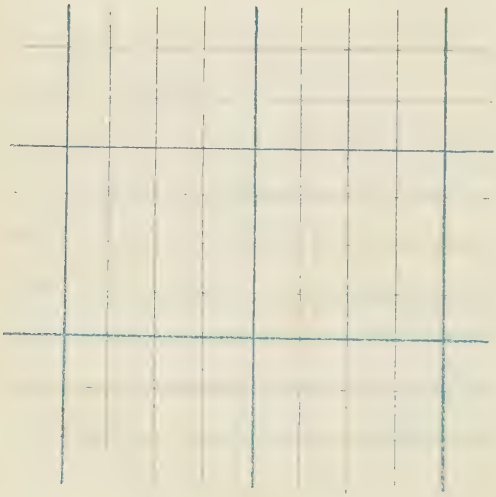


Fig. 1.

(*c*) *Patterns for Garments.*—Educe that for garments requiring to be made frequently a good housewife will have her pattern ready, to do away with measuring every time the garment has to be made, and these she generally drafts on tissue, extension, or newspaper. Show a piece of extension or lined paper.

(*d*) *Diagram on Sectional Paper.*—Show pupils a pattern of a pinafore and a diagram of the same garment on sectional paper. Get them to observe that they are both alike, but that the sectional paper is only one-fourth the size of the other. Refer to the convenience of sectional paper in schools. If a large pattern, say a night-dress, had to be taken off, there would not be desk-room to accommodate the pupils and their paper. But the pattern can be taken off by them on this

sectional paper $\frac{1}{4}$ inch or $\frac{1}{8}$ inch scale, and transferred to tissue or newspaper in their own homes.

Draw the children's attention to this sectional paper (Fig. 1), and get them to tell you that the lines are not alike, some being dark and others light. Point out that there are three faint lines between every two dark ones. Get them to measure the distance between two dark lines, which will be found to be 1 inch, and therefore each of the four spaces between these dark lines must be $\frac{1}{4}$ inch. Tell the children that they are to treat *each of these spaces as one inch*, but that every diagram they draw on it is exactly *one-fourth of the correct size*. Show that the chequered cutting-out board is a facsimile of their paper, only the spaces are real inches, not $\frac{1}{4}$ inch.

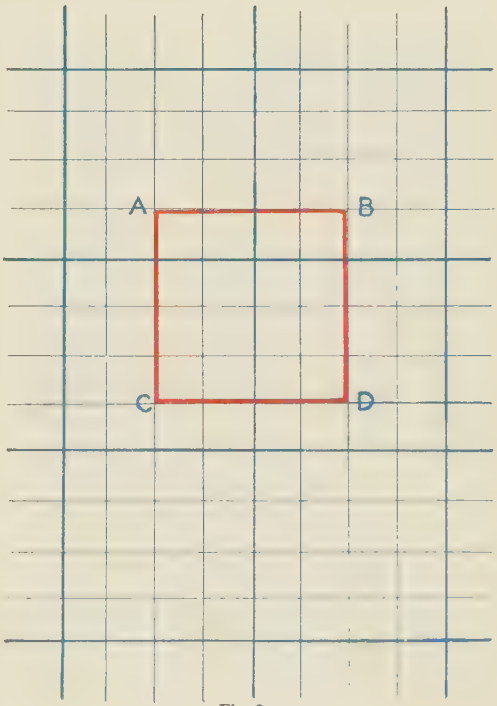


Fig. 2.

Impress on the children that they must count *spaces*, not lines, or if lines, then one more than the number of spaces they require; so if they want four spaces they must count five lines.

(*e*) *Tissue Paper.*—Show how soft and yet tough this paper is, and how admirably fitted for basting stitches being taken through it. Explain that extension paper is large sheets of tissue paper ruled with red lines $\frac{1}{4}''$ apart.

Having explained the use of the various appliances before them, tell the children that they are not to cut out a garment for the first lesson, but two simple geometrical figures to accustom them to the use of the materials before them.

How to Draw and Cut out a Square (*a*) *Diagram.*—I. Show pupils a piece of paper 4 inches square, and tell them they are now to draw a diagram of it on the sectional paper.

With chequered B.B. show the children how to make a dot where two lines meet. (Fig. 2.)

Tell them to call it A, and for convenience make the A above the dot. Impress on them that the *dots are the important points*, not the letters, which are only the names by which we recognize the dots.

II. The teacher must now count, along with the pupils, four spaces to the right from A, make another dot, and call it B.

III. She and they must now take their rulers and connect these two points by a straight line.

IV. From A and B measure along with pupils 4 inches in straight lines downwards, make two dots and call them C and D, which letters, for convenience, are to be placed below the dots. Show them how to connect AC, CD, and BD with straight lines.

V. Examine the children's papers to see if they are accurate.

(*b*) *Transference of Diagram to Tissue Paper.*—The teacher will pin her paper on the B.B., so that each individual may see it, and make pupils place theirs evenly on the desk before them.

I. Call attention to the straight edges of the paper, and with coloured chalk write A in the left-hand top corner, where the short and long edges meet. Get the children to do the same.

II. The teacher must now take up her tape-line, find four inches, and laying it along the short edge, from A towards the right, make a dot and call it B, and the same along the long edge downwards, and call it C. Get pupils to do the same.

III. In the same way measure 4 inches across from C towards the right, and make a dot which may *intentionally* be made somewhat below the true point.

IV. Now call attention to the fact that this dot D has also to be 4 inches from B. Measure, and let the pupils see that it is not so, and so impress them with the fact that they may measure on paper *unevenly*, which will not do. Remove the dot to its proper place, and get the children to draw straight lines with their rulers to connect CD and BD.

(*c*) *Cutting out of Square.*—I. Tell the children that as AB and AC are quite even they need not touch these lines.

II. Then show them how to insert the scissors and cut CD and DB nicely without making any ragged, notched, or zigzag edges.

III. Examine children's work, and give them a few words of praise or rebuke, as they deserve.

How to Draw and Cut out an Equilateral Triangle (a) Diagram.—I. The teacher shows them the triangle, draws one on B.B., and gets the names—base, side, apex. (Fig. 3.)

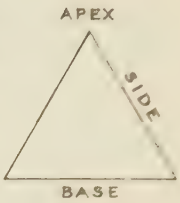


Fig. 3.

II. Measure it before pupils, and get them to tell that it is equilateral, for its sides are all 6 inches long.

III. The teacher on B.B. and the children on sectional paper make the two points A and B on one of the horizontal lines, 6 spaces being between them, and connect them. (Fig. 4.)

IV Show the children now how to find the apex C. Tell them (1) to measure up 5 spaces on a straight line from A, and make a dot, but give it no name, (2) to count 3 spaces towards the right from the dot last made, and make another one, which they will call C.

Get them to connect C A and C B with slanting lines.

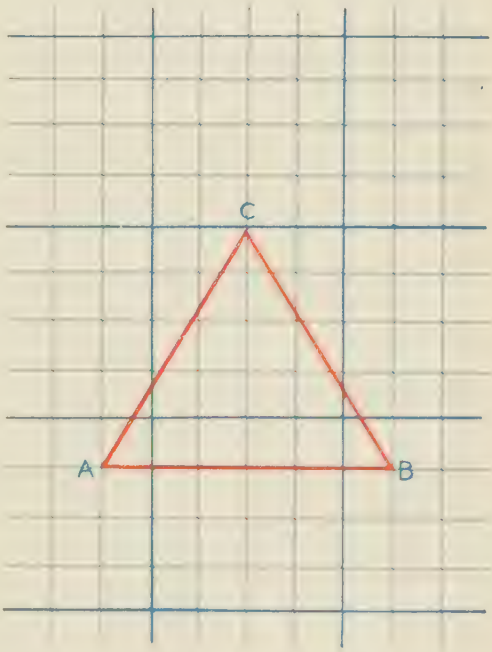


Fig. 4

(b) Transference to Tissue or Extension Paper.—I. Show the children how to mark A at the left-hand foot corner of their paper, and finding 6 inches on their tape-lines, lay it along the short edge from this point A, and mark it B.

II. Tell the children it will be rather difficult to do the next part well, so they must be careful. Show them that they must (1) Measure up 5 inches from A. and B, and make two dots, which ought to be in a straight line. (2) From A and B measure 3 inches to right and 3 inches to left, and mark the point obtained C.

III. Get the children to connect CA and CD with slanting lines.

(*c*) *Cutting out of Triangle.*—Ask the children to cut it out, and when finished get them to measure each side, when they will be surprised to find them all 6 inches long. Explain that though they only went up 5 inches from A, the slant of 3 inches gave the extra 1 inch of length.

N.B.—Teachers should divide this lesson into three parts: (1) Appliances, (2) The Square, (3) The Triangle.

HOW TO CUT OUT A COTTAGE PINAFORE BY FOLDING.

Apparatus.—Two pinafores of different sizes, B.B. with coloured chalks, piece of tissue or lined paper $20'' \times 32''$.

Materials for Pupils.—Piece of tissue or lined paper $20'' \times 32''$, or $10'' \times 16''$ if desk accommodation be limited, scissors, ruler, &c.

I. Show the two pinafores. Tell the pupils they are the most economical pinafores that can be made, and write the name on B.B.

II. Measure them both before the pupils, and draw from them that the

Length	$= \frac{5}{8}$ of the width.
Shoulder	$= \frac{1}{6}$ of the length and $\frac{1}{8}$ of the width.
Armhole	$= \frac{1}{6}$ of the length when cutting out, but with the epaulet formed by the shoulder, about $\frac{1}{4}$ of length when made up.
Neck slope, front	$= \frac{1}{8}$ of the length.
„ back	$= 1\frac{1}{2}$ of the length.

III. Write these proportions on the B.B., get the pupils to transfer them to their note-books, and afterwards commit them to memory.

IV. *Folding of Paper into Squares.*—Ask pupils to take their pieces of paper and place the two short edges together, so as to make a crease down the middle of the material—the open edges to be at the left and the fold at the right. (Fig. 1.)

The teacher should draw the diagrams, and, pinning her paper on the B.B., do this and every other step along with her pupils. Impress on the pupils that they must pinch the folds down firmly.

V. Now get them to place this single fold above the two open edges, so that the width of the paper or material is divided into four parts by the two creases, and the open edges are still at the left hand, as in Fig. 2.

Fig. 1.

Fig. 2.

VI. Show the pupils that they are next to take the short edges of this fourfold oblong, and place them right above the short edges at the top. (Fig. 3.)

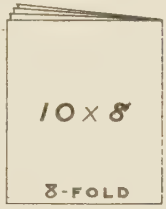


Fig. 3.

Fig. 4.

VII. Draw Fig. 4 on B.B., and show the children how to divide this new oblong into three divisions by two creases. As this is somewhat difficult, the teacher should examine each child's work to see that the folds are right before they pinch them firmly down.

VIII. Tell them to open out their papers till they are as in Fig. 5. Measure this oblong before the children, when they will see that it is $20'' \times 8''$.

IX. Now draw Fig. 6 on B.B., and folding the oblong before them in the same manner, get the pupils to divide the width of the oblong by other three creases into four divisions.

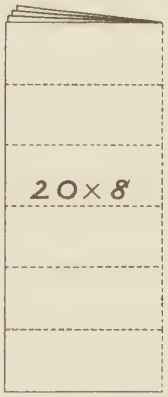


Fig. 5.

Fig. 6.

X. Get the children to open out their papers until they lie as in Fig. 7, and tell them they are now to divide the topmost space into four parts. Tell them to number the lines or creases along the top and also down the middle or 0 line, as in Fig 7.

XI. *Shoulder Slope.*—Show the pinafore, and tell the pupils that for the shoulder they are to crease in or pencil a diagonal line across the first division, from 1 on the top line to 1 on the middle line, so that the shoulder shall occupy $\frac{1}{8}$ of the width and $\frac{1}{6}$ of the length.

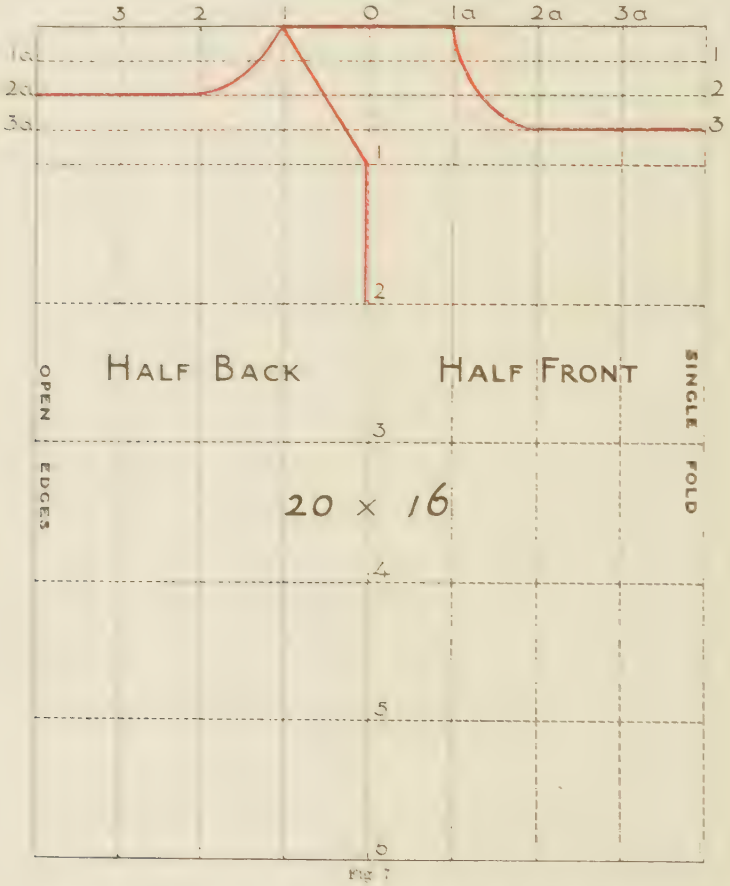


Fig 7

XII.—*Armhole.*—For the armhole they must pencil or crease down the centre line the depth of one or one-and-a-quarter spaces.

XIII. *Neck Slope.*—Get the pupils to letter the three creases of the top space 1, 2, 3 along the *doubled* fold, and 1 *a*, 2 *a*, 3 *a* along the *open* edges.

XIV. Show that the front slope is deeper than the back, so they must

pencil across from 3, two spaces, and curve up to 1 *a* on top edge for front slope, and do the same from 2 *a* to 1 on the top edge for the back slope.

XV. Show the children how to cut the *shoulder* line 1 *a* to 1, the *armhole* line, and the *neck-slope* lines.

XVI. Tell the children that the shoulder is formed by placing the straight line 1 to 1 *a* on the top edge, *over the slanting line* 1 *a* to 1, and that when cutting the pinafore out in cloth they may add 1 inch to the length for the hem.

Practise the pupils in folding different sizes of pinafores, $10'' \times 16''$, $25'' \times 40''$, &c.

Directions for Making-up Pinafore.

1. Lay a fold $\frac{1}{4}$ inch deep on the two back edges, and hem neatly.

2. Fold a hem $\frac{1}{2}$ inch deep along the foot, and hem it also.

3. Fold 1 to 1 *a* on the top edge over 1 to 1 with a counter-hem $\frac{1}{4}$ inch deep, and finish with two rows of hemming or stitching. The straight edge should fold over the cross edge, and so form an epaulet to the armhole.

4. Hem a fold round the neck $\frac{3}{8}$ inch in depth, and run in a narrow tape for a string, stitch the tape in the middle of the front to prevent its coming out, and hem the ends of it, or put on a false hem.

5. Hem round the armholes $\frac{1}{8}$ inch in depth, and strengthen the foot of them, either with a strengthening-tape or buttonhole stitch.

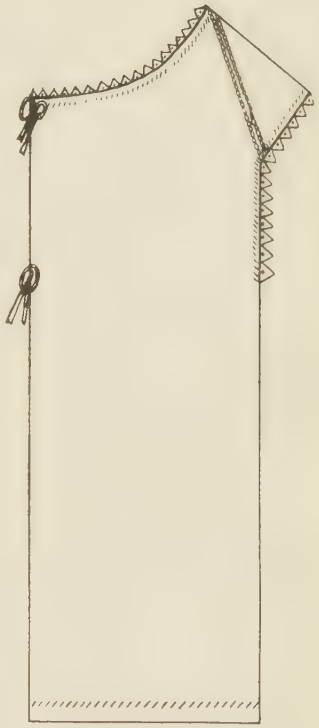


Fig. 8.—Pinafore folded.

6. If made of Holland, sew on other two pieces of tape to the back edge, about 1 inch beneath the armholes, to form strings to tie with.

7. If a fine muslin pinafore, gather the fulness in front with two rows of gathers, one row lying opposite the foot of the armhole, and the other 1 inch below; leave about 2 inches plain on each side of the armhole. Set in the gathers to a band of embroidery insertion $6'' \times 1''$, and attach sashes $20'' \times 2''$ to each end of the band; the sashes must be hemmed all round.

8. Finish the neck, armholes, and sash ends with embroidery, Torchon or Valenciennes lace $\frac{1}{2}$ inch or $\frac{3}{4}$ inch in depth.

The pinafore may be made in Holland, print, diaper, muslin, &c.

HOW TO CUT OUT A CHEMISE BY FOLDING.

CHEMISE—FIRST SIZE—HALF PATTERN.

Remarks.—1st. The dark lines in the diagram mark the divisions of the "field" into quarters; the dotted lines the divisions into eighths. The whole length equals 36 inches, the width 18 inches.

2nd. The second and following sizes of chemises should be rather longer

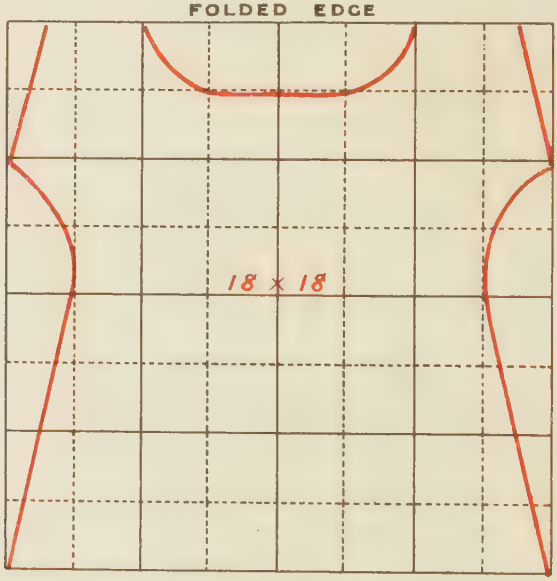


Fig. 1.

than they are wide, $22\frac{1}{2}'' \times 20'' : 26'' \times 22''$, because children grow more to the length than to the width.

3rd. The armholes in these lengths, $22\frac{1}{2}'' \times 20''$, &c., would occupy *rather less* than one-fourth of the whole length; the exact size would be about one-fifth.

HOW TO PUT ON A STRENGTHENING-TAPE.

Apparatus.—Garment with tape basted on in position, shirt with gusset for strengthening, sheet of white paper cut so as to represent the side opening of drawers, and crimson paper tape (scale 4″ to 1″), needles and thread to suit each.

Pupils' Materials.—Piece of cloth 6 inches square, cut same as paper, piece of tape 3 inches long, needles, and No. 50 or 60 thread.

Introduction.—Show a shirt with a small gusset put in the wrist opening of sleeve. Elicit the use of it, if possible, and show how it strengthens the seam. Elicit other methods of strengthening, as buttonhole stitch, and

Fig. 1.

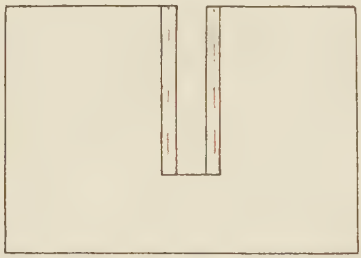


Fig. 2.

tell the children they are now to be taught a new method, viz., the strengthening-tape, used for openings (especially of flannel garments, where gussets would be too bulky).

I. *How to Prepare the Opening.*—Take a piece of paper, and show the children how to lay a narrow hem down both sides of cut for opening. Show a cottage pinafore. Having drawn Fig. 1 on B.B., tell them their exercise is to represent the armhole of the pinafore.

Show a pinafore with the armhole torn down, and thus impress on pupils the necessity for strengthening such openings.

Explain that the hem must taper to a narrow point at the foot. It would be as well in passing to show, by diagram on B.B., why it is better to taper away at the foot than to cut the foot horizontally for about $\frac{1}{2}$ inch, and make the hems equal in breadth all the way. (Fig. 2.)

(2) Get the class to prepare and baste hems on their pieces of cloth exactly the same, about $\frac{1}{4}$ inch broad at top. Examine their work, and then make them lay down their garments.

II. *Folding of Tape.*—The tape must now be folded. The teacher will show the folding on the paper tape, and at the same time the class will fold

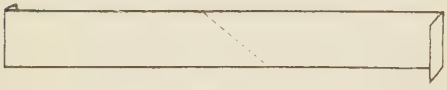


Fig. 3.

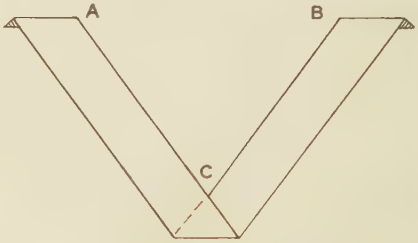


Fig. 4.

their pieces after they have seen the teacher do it. Impress on them that this is generally called a *shaped* strengthening-tape.

Dictate.—(1) Lay a narrow fold towards you on one of the small ends of the tape, and another away from you on the other end of the tape. See Fig. 3, which must be drawn on B.B.

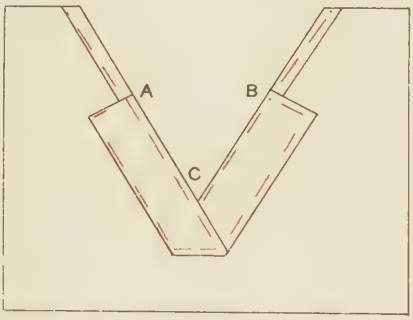


Fig. 5.

(2) Then show how the tape must be doubled about the middle, not straight across, but slanting so as to form an angle. (Fig. 4.) Examine the tapes of the class, and see if they have made the angle very obtuse, because then the tapes will not set so well.

III. *Placing of Tape.*—Make class lay down their work now. Take the paper garment and show pupils how to place the tape on it. Show that the foot of the tape must be placed so as to form a horizontal line, and the corners at the foot of the tape must be kept square, and not rounded at all. The ends of the tape will therefore not lie quite horizontal, but must slant a little. (Fig. 5.)

Make class take up garment and baste the tape on wrong side in the same way, noticing to keep the foot of the tape straight, and the corners square.

IV. *Sewing on of Tape.*—Take a pair of drawers or pinafore with tape basted on, and show how it is to be sewed. The pupils will see this better if the garment be white and the tape be crimson or any other dark colour.

(1) It is overedged round the edge of the opening. Holding the *right* side of the garment towards them they seam from A to C, and thence to B.

(2) On reaching B, push the needle through to the *wrong* side, and hem to the base of the triangle at the foot of the slit.

(3) Tell the pupils that when they reach this point they must slip their needles up to C, and hem or stitch the one piece of tape on to the other where they cross. Impress upon them that none of the stitches in this part must go through to the right side. Tell them not to hold the tape too tightly, else they will pucker it, and point out that had they been putting the tape on a flannel garment they would have held the tape tightly and the flannel loosely, because the flannel will shrink when washed more than the tape will.

Finish the lesson by showing a night-dress or other garment with a *straight* strengthening-tape. For diagrams of straight and rounded tapes see supplement.

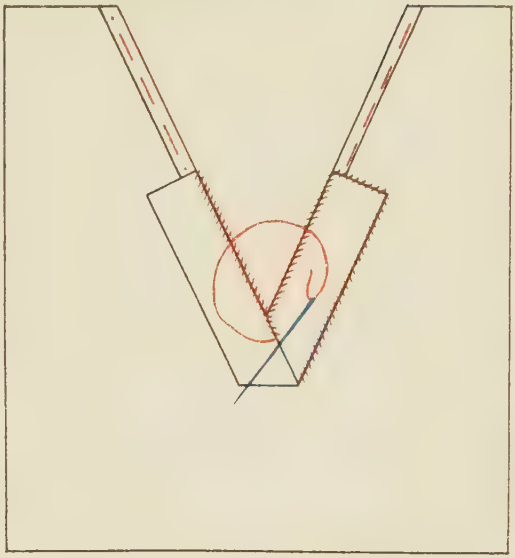


Fig. 6.

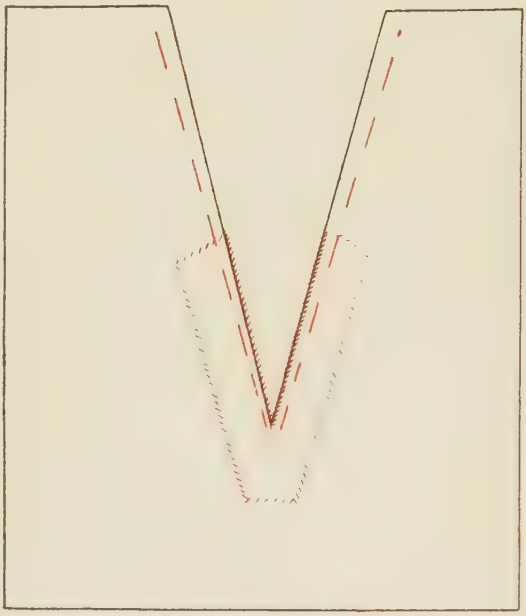


Fig. 7.—Right Side Completed.

SEWING ON OF AN UNPIERCED LINEN BUTTON.

Apparatus.—Large linen buttons 4 inches in diameter; frame with linen band 18″ × 6″, or P.P.A., B.B., &c.; linen band with large buttons sewn on by different methods. (See Fig. 1*a*.)

Materials.—Small calico band, two linen buttons unpierced, suitable needles and thread.

Introduce the lesson by referring to the different ways in which our clothes are fastened—(1) strings, (2) hooks and eyes, loops or eyelet-holes, (3) buttons and button-holes.

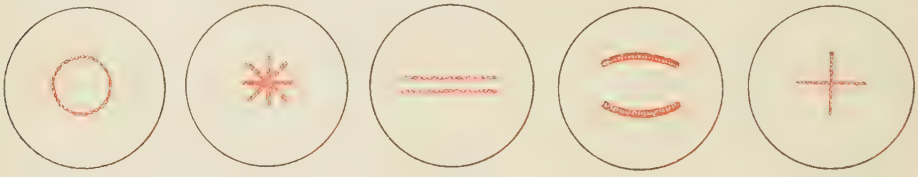


Fig. 1 *a*.

I. Show the class buttons made of different materials, and tell them that for underclothing pearl and linen buttons are chiefly used.

II. Show specimens of pierced and unpierced linen buttons. Call attention to the metal rings enclosing the holes of the pierced one. Tell the pupils that unless the metal used be of the very best material they are apt to produce iron-mould when the garments have been washed, so that it is safer to use unpierced ones.

Get pupils to tell the difference between the right and wrong sides of linen buttons. Cut open a linen button, so that they may see the metal ring inside, and tell them that buttons of the same size vary in price, according to the number of folds which cover these rims. A four-fold linen button is dearer than a two-fold one, &c.

Fig. 1 *b*.

III. Have specimens of large buttons sewn on in different ways. Show these to class, and tell them the two most common ways are Nos. 1 and 2—(1) a circle of stitching, (2) a star.

IV. *How to Pierce a Circle.*—With large button and coloured chalk show the children how they are to draw two lines with point of needle, one perpendicularly and the other horizontally, between two threads of the linen. Draw Fig. 1 *b* on B.B.

Tell the children that the point where the two lines meet will form the centre. Get them to do this on their own buttons, and take their needle and thread through from front to back to mark it.

Now make the children prick a little hole with their needles on each line, about half-way between the centre and the outside edge. The holes should be nearer the centre than the edge, and *not close to the metal rim.* (Fig. 2.) Show this on large button and B.B. Then ask the children to prick a hole between each of the four already made.

Draw the two following diagrams on B.B., and explain that as they are

Fig. 2.

Fig. 3.

Fig. 4.

forming a *circle, not a square or diamond,* these second four holes must be made a little nearer the outside edge than the first four. (Figs. 3 and 4.)

If the button be a 26-line one, that is, about the size of a threepenny piece, or $\frac{1}{2}$ inch in diameter, 8 holes will be sufficient for a star, 16 will be sufficient for a stitched circle. Get them to pierce both buttons, one for a star the other for a circle.

Note.—If the piercing of the circle be considered too difficult then make the children hold the button up between them and the light, and with the eye of the needle mark a circle half-way between the centre and the edge.

V. *Sewing on of Button by a Star.*—Make the children lay down their buttons, and taking up their bands, double the two long edges together so as to make a crease for the centre. (Fig. 5.)

Fig. 5.

How to Fasten on the Thread.—Draw a diagram of the band on B.B., and show children that as they have to sew it on by a star, and the edge of the button is to be about $\frac{1}{4}$ inch from the short edge of the band, they must slip their needles between the two folds of the band, and bringing them out about $\frac{1}{2}$ inch from the edge, make the ends of

their threads secure by a small back stitch. Demonstrate this on the frame.

VI. *Making of the Star.*—Now show the children how to bring the needle through the centre hole in the button, and place their button so that the perpendicular lines on it will be parallel with those of the band.

Having brought the needle up through the centre hole, show the children how to do the perpendicular rays of the star first, then the horizontal, and, last of all, the slanting ones. Impress on them that the needle has to be brought up through the centre as they finish each ray, except for the *last one*, when they bring up the needle *between* the button and the band, *outside, and close to the rays of the star.*

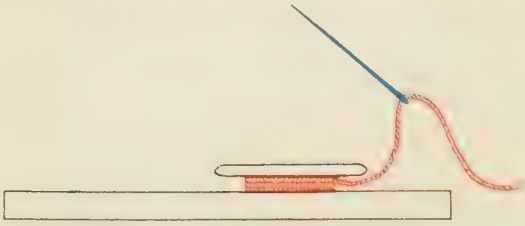


Fig. 6.

VII. *Stemming.*—Now show the children how to wind the thread round the button four or six times. (Fig. 6.) Tell them that this process is called stemming. Write the word on the B.B. Explain the reasons for stemming.

(1) To protect the sewing threads from being rapidly cut by the friction of the button-hole.

(2) To raise the button from the band, so as to allow the button-hole to sit more flatly. Show buttons with shanks, and explain that these do not require to be stemmed, as the button-hole has plenty of space to rest beneath them.

VIII. Impress on the children the necessity for not winding the cotton or stitching too tightly, else the button will soon come off, bringing a piece of

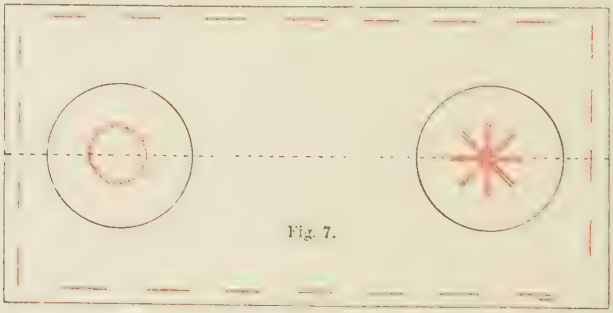


Fig. 7.

the band along with it. Show a band with a deep pit on the wrong side, caused by these faults.

IX. *To finish off* pass the needle through to the wrong side, take one or two small back stitches, slip the needle between the folds, and bring it out about ½ inch from the point where it went in, and cut off.

X. Ask the class to sew on the other button with a stitched circle, and do it along with them on the frame. (Fig. 7.)

The only explanation necessary here will be that they commence the thread a little nearer the edge of the band, and bring out the needle for the first stitch at the hole nearest the right-hand side of the button.

Tell pupils that buttons should always be sewn on double material. If

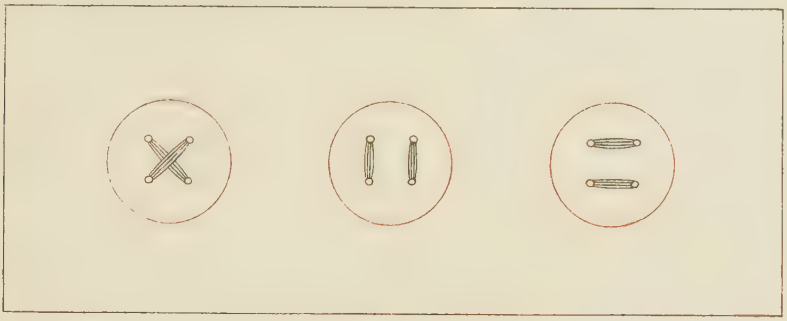


Fig. 8.

the button has to be affixed to single material a piece of tape, flannel binding, &c., must be placed on the wrong side of the garment to make it double, else it will soon break into a hole.

Pearl buttons, if pierced with four holes, are sewed on as in Fig. 8. Commence, stem, and finish off as when sewing on a linen button.

BUTTON-HOLING.

Stage I.—The Stitch on Canvas and on a coarse Linen Band.

Apparatus.—Large diagrams of button-holes of various shapes (Fig. 1), demonstration frame, garments with button-holes worked on them.

Materials.—Canvas sampler as in Class III., needles and suitable thread, coarse linen band.

Introduction.—Refer to the pupils' previous lesson on sewing on buttons, and show that buttons are of little use on garments (except for ornament) unless they have a corresponding button-hole.

I. *Definition.*—Call attention to the specimen button-holes, and write the following definition on black board:—

A button-hole is a slit or close opening protected all round by a knotted edge.

Get the class to repeat the definition simultaneously.

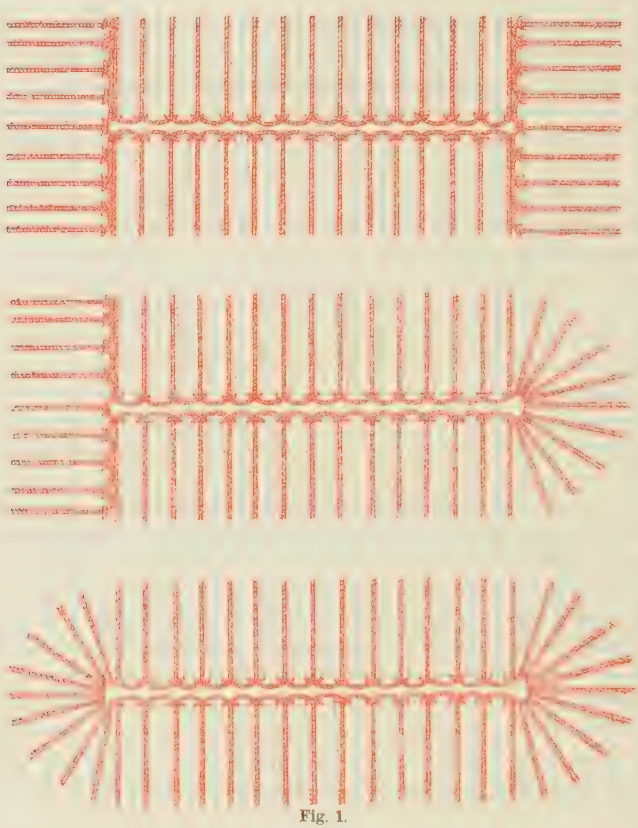


Fig. 1.

II. Explain to them that button-holes are always worked on double or triple materials, but as they are very difficult to do the children will learn the stitch simply and the two ends on canvas first.

III. *How to Hold Work.*—Ask the children to hold their canvas, right side uppermost, over the first and second fingers, the thumb and remaining fingers keeping it in place.

IV. *Making the Stitch.*—Dictate the following, and show each point on the demonstration frame:—

(1) Bring through the needle from back to front, eight threads from top and left-hand edges, and leave about a finger length of cotton, which is to be finished off neatly afterwards, or darn downwards, over and under, 4 threads, and leave a small end of cotton, which can afterwards be covered by the last stitch of the opposite side of the button-hole. (Fig. 2.)

(2) Insert the needle from front to back into the same space, and bring it out four threads downward in a straight line. Point out this on Fig. 2.

(3) Let the needle remain in the canvas thus, while you bring the double thread which comes from the eye of the needle round the point from *left to right.* (Fig. 3.)

(4) Draw the needle outwards at right angles to the chest.

Fig. 2.

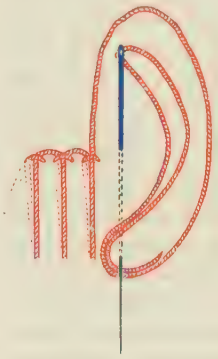


Fig. 3.

V. Get several children to do the same on the demonstration frame, and show them that the thread must always be to the *right* hand of the needle when it is inserted, else no knot will be formed. Elicit from them that two stitches are made at the same time, one on the right side and one on the wrong.

VI. Get pupils to make a stitch, and question the children as to (1) how many threads they take up on the needle, (2) where the thread must be when they insert the needle, (3) in what direction they take the thread round the point of the needle, and (4) in what direction they draw out the needle.

VII. Show that for the next stitch the children pass over one thread towards the right, and do it in the same manner. When they have done a few stitches call their attention to the knots or twist on the edge. Tell pupils that they pass over one thread on course material and two on very fine to allow these knots to lie quite flat and regular.

VIII. Show that if there were no knots the friction or rubbing of the button on the edges would soon wear them away, and the button-holes would get untidy and ragged in a short time.

IX. Examine each child's work, and as soon as they can do the stitch on canvas allow them to practise it on the edge of the bands they did in Standard III. or a band made of coarse linen.

X. The points which the teacher must explain and clearly demonstrate on a Java canvas band are:—

(1) *How to Hold the Edge.*—Hold it almost as for seaming, between thumb and forefinger of left hand, the forefinger slightly bent towards the worker's chest, and the thumb immediately below where the needle is to be inserted.

(2) *How to commence* by slipping the needle between the folds, and bringing it out at the left-hand corner.

(3) *How to Make the Stitch.*—With the thread to the right of needle, insert it behind the band, and bring it out to the front about four threads down, just above the left thumb nail.

(4) Impress on the children the necessity for having all the stitches of one length, but that they must not count threads after the first two stitches, but simply bring them out always between the same two threads of the material. Tell children that the stitch is used not only for button-holes, but for (1) finishing the ends of *narrow* tape where hemming might prove clumsy, and (2) neatening the foot of openings in garments which show *raw edges* on *wrong* side.

Stage II.—The Rounded End of Button-hole.

Apparatus.—Diagram with rounded end and square end in different colours from sides, with stitches numbered and sufficiently large to allow every pupil to see them (Fig. 1). Demonstration Frame.

Children's Materials.—Canvas sampler (not penelope), suitable needles and thread.

I. Call the attention of the class to the various diagrams, and elicit from pupils that some button-holes have rounded ends, some square ends, some both rounded and square. Tell them they are going to have a lesson on the rounded end.

II. *Appearance of the Rounded End.*—Show from diagram that all the stitches of the rounded end terminate in the same square, or meet in the same hole, and that they form a semicircle, or resemble an open fan.

III. Ask the children to point out any difference they see between these stitches and those of the edge. There are several differences, but take up first the want of knots. Tell them (1) that in calico and linen they generally have

no knots, in woollen textures they are sometimes knotted; (2) because unknotted and overcast like an eyelet-hole the rounded end is sometimes called the "eyelet" end; and (3) that, if knotted, five stitches would be enough for the round, as there would be no room for nine knots in the space left for it.

IV. *How to do the Round.*—Get pupils to count the stitches on the diagram. They will tell you nine. Explain that if needle goes down four threads at the side there will be nine, if only three at the side, seven, and so

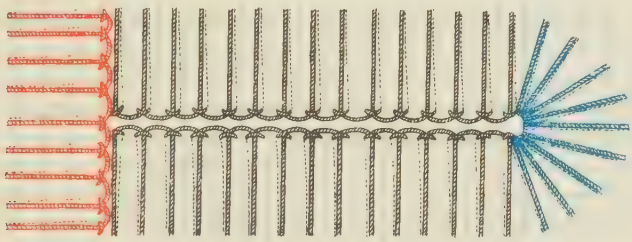


Fig. 1.

on, although some prefer only seven stitches even when the side stitches cover four.

V. Call the children's attention to the fact that these nine stitches form a semicircle, and that three of the stitches slant, three are straight, and three slant again.

VI. Work the round on the Demonstration Frame, getting the pupils to tell from diagram where the needle is to come for each stitch. Show from large diagram, or by doing it on B.B., that at

1st stitch they insert the needle into the same hole as the last stitch of the side, and bring it out one thread to the right.

2nd stitch. Insert in the same hole, and bring it out one thread up and one to the right.

3rd stitch. Insert in the same hole, and bring it out one thread up and one to the right. Ask how many stitches are done and how many remain undone.

4th stitch. Insert in same hole, and bring it out one thread up.

5th stitch. Insert in same hole, and bring it out one thread up.

6th stitch. Insert in same hole, and bring it out one thread up. At fifth stitch show that it must be on a line with the slit (apparent only on canvas), unless the teacher prefers to draw out two threads for the slit.

7th stitch. Insert in the same hole, and bring out one thread up and one to the left.

8th stitch. Insert in the same hole, and bring out one thread up and one to the left.

9th stitch. Insert in the same hole, and bring out one thread up and one to the left.

VII. To finish the ninth ask the children to bring their thread up and keep it to the right of the needle, insert it, and bring the double thread from the eye round the needle from left to right, and draw up as for an ordinary stitch, thus completing two stitches at one time.

VIII. Bring out several pupils to do this last part on the Frame.

IX. Show from the Frame and the diagram that if the round be perfect the seventh, eighth, and ninth stitches will correspond with the third, second, and first.

X. Get children to take up canvas and do the round end while you do it along with them on the Demonstration Frame.

XI. *Position of Rounded Ends.*—Tell the children that the rounded end

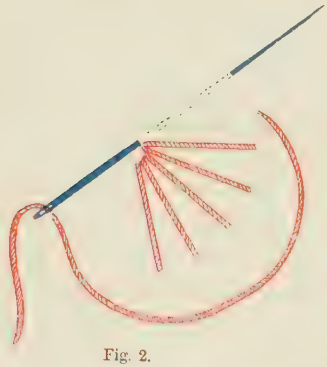


Fig. 2.

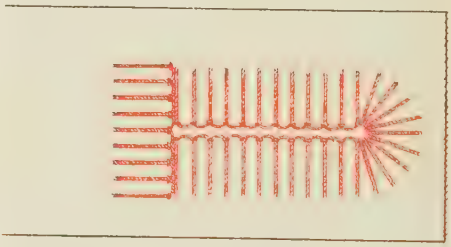


Fig. 3.—End of Band with Button-hole.

must always go next the end of the band to allow more room for the shank of the button, and also because it lies flatter under the button than the braced end. (Fig. 3.)

Stage III.—The Square End of Button-hole.

When the children are perfect in the rounded end teach them the square end with the same apparatus and materials.

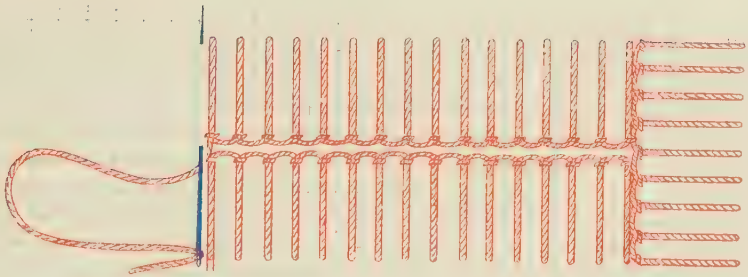


Fig. 1.

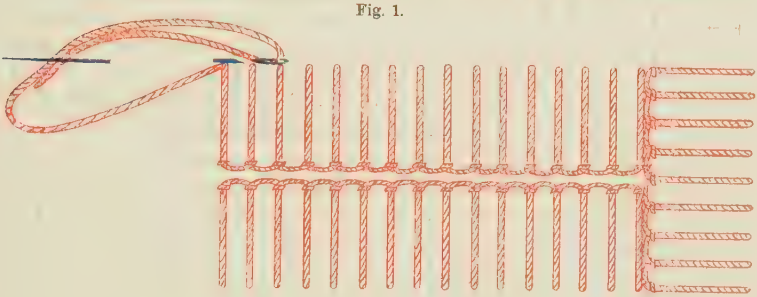


Fig. 2.

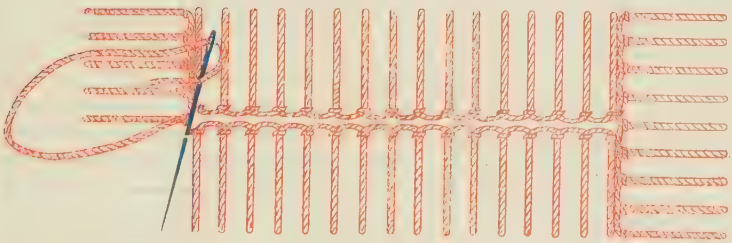


Fig. 3.

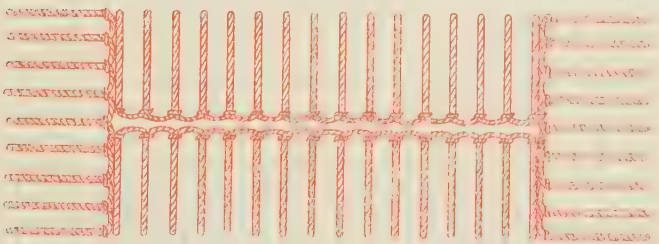


Fig. 4.

I. Give the *various names* for this end:—Square, bridged, barred, braced. Explain them, and show that it braces, bridges, or bars the two sides together, and prevents the material splitting up. Tell pupils that the square end is stronger than the rounded one. Ask them to look at the diagram and count the stitches.

II. Explain that these will correspond to the number in rounded end, and for the same reason.

III. Demonstrate on Frame how, after finishing the last stitch on the second side, they must insert the needle into the same hole and bring it out at the foot of the last stitch made. (Fig. 1.)

IV. Ask the children to turn round their work and, inserting the needle into the same hole, make an ordinary button-hole stitch.

V. Work on D.F. along with the pupils five stitches. Impress on them that for the fifth stitch the needle must be inserted in the apparent slit.

VI. Before doing the sixth stitch show the children how to slip the needle from left to right through the twist or knot of the *first* stitch made. (Fig. 2.) This will prevent the first loop from slipping, and keep the two edges closer. If preferred, the knot on the first stitch could have been caught hold of and secured to the last stitch of the second side of the button-hole before beginning the bridged end.

VII. Go on till the last stitch is made, then take the needle through from front to back, and finish off the thread as well as the one left at the beginning.

VIII. Show the pupils that the first and last stitches of this end must not extend beyond the edges of the button-hole, but be in a straight line with them. (Fig. 3.)

Stage IV.—How to Cut and Work a Button-hole on Calico.

Apparatus.—Button-hole sheet of P.P.A.; specimen with large button sewed on and button-hole to correspond made.

Children's Materials.—Calico band with button sewed on, sharp-pointed scissors or penknife, needles, and suitable thread.

I. Call the attention of the pupils to the bands before them, and then to the large specimens. Elicit from them, as regards the position of the button-

hole, that it is on a line with the centre of the button, and a short distance from the edge.

II. *Position of Button-hole.*—Impress on the children (1) that the button-hole is always cut at least $\frac{1}{4}$ inch from the short edge, so as not to interfere with the folded ends. (2) That no material is cut out, but that the *slit* or opening is made between two threads of the material. Show these points on the P.P.A.

III. *Size and Cutting of Hole.*—Measure the button of P.P.A., and show that the length of the button-hole corresponds with the diameter of the button to be used along with it. (Fig. 2.) Explain diameter if necessary. Tell the pupils that they should cut the slit a very small piece larger than the length of the diameter of the button, to let the button slide in easily. Show them how to insert the point of the scissors $\frac{1}{4}$ inch from the short edge, and cut the hole evenly. If a penknife be used (which is preferred by some teachers) the pupils must be taught to cut the band on a small block of wood, so as not to injure the desks.

IV. *Thread Used.*—Tell the pupils that the thread used for a button-hole should be about the same thickness as the threads of the cloth, and they should allow about a finger-length more than the ordinary $\frac{5}{8}$ of a yard used for a button-hole $\frac{1}{2}$ inch in length. If too short they must join, and this spoils to some extent the appearance of the button-hole. If *knots* are to be avoided the pupils must thread their needles so as to work with the "rub of the cotton". Explain.

V. *Commencement of Thread.*—With P.P.A. show how to commence the

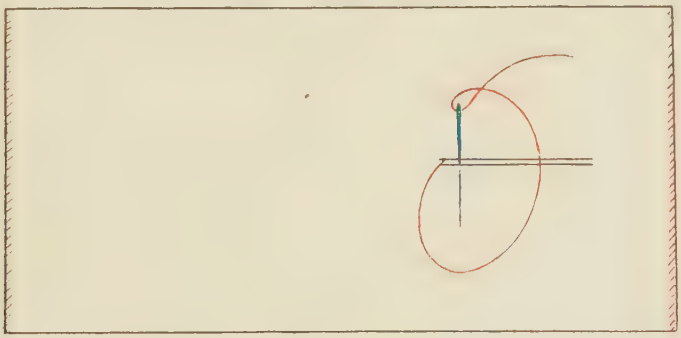


Fig. 1.

thread by slipping the needle in between the folds, on a line with the slit and $\frac{1}{2}$ inch from the end to be braced. (Fig. 1.) (The rounded end must be nearest

the short end of band.) Draw needle out at left-hand side of opening, and leave an end of cotton projecting, lest the thread come out. This end must be cut away after a few stitches are done.

VI. *Working of the Button-hole.*—Work the button-hole along with the children, and, while doing so, recapitulate the chief points taught about the stitch when they were doing it on canvas.

Impress on the children the necessity for (1) holding the button-hole tight between the thumb and forefinger, and not stretching the two edges of the button-hole apart, or poking their fingers through it.

(2) Drawing up the cotton firmly and quickly, so that the edge may be sufficiently strong. Show the children that, unless these two points are attended to, the edges of the button-hole will gape, which they should not do. The two edges should be quite close. Examine the pupils' work to see if they are attending to these two points.

VII. *Join in Thread.*—When the pupils have done the rounded end, and a few stitches of the second side, ask them to break their thread sharp off, as it usually does so when a break occurs. Then let them undo one stitch, which will leave a little end to be worked in with the rest. Show the children how to slip the needle with new thread in between the folds as at commencement, but at right angles to the button-hole, and bring the needle out in the middle of the last knot, and proceed.

VIII. Show with P.P.A. that at the last stitch of the braced end they take their needle through to the back, close to the last stitch made, and, having taken two small back-stitches over the first stitch of button-hole, they slip the needle in between the folds, and bringing it out about ½ inch from the place of insertion, cut off the remainder.

IX. Then make a few remarks on (1) The position of button-holes, and the method of working the different ends according to the position. (2) Other uses of the stitch.

Position of Button-holes.—(1) On bands button-holes are usually worked the warp or selvedge way of the cloth, and have generally one bridged and one rounded end.

(2) On the fronts of chemises and night-dresses they are generally worked with two bridged or barred ends. These garments fasten from right over left

(3) On the fronts of gentlemen's shirts, which always fasten left over

right, they have also barred ends, but if studs are used they are generally rounded, and two sets must be worked; those on the left side being cut selvedge way, those on the under side the weft way, so that when the front opening is closed they lie thus +.

Fig. 2.

Note.—The pupils in Classes VI. and VII. might be allowed to practise button-holes on the weft and also on the cross. Button-holes *on the cross* are more easily worked when either (1) the edges are loosely overcast, (2) a row of stitches is run round them, or (3) a fine straw needle is inserted about four threads from each of the long edges *before* the cut is made and the stitches worked over it.

CUTTING-OUT LESSON.—CHILD'S FIRST SHIRT.

Apparatus.—Chequered B.B., coloured chalks, flat pattern of the shirt on paper, made-up garment, piece of paper $10'' \times 22''$.

Pupils' Materials.—Diagram-book containing sectional paper, or sheet of sectional paper, pencils, ruler, scissors, piece of lined or tissue paper $10'' \times 22''$.

I. *Shirt.*—Show the garment, and having got the pupils to look at it carefully, elicit that the width of it is *about* twice the depth.

II. Tell the pupils that it is $10'' \times 22''$, and if we exclude the 2 inches folded over in front, its width is *exactly* twice the depth.

III. On chequered B.B. mark off the *field* 10″ × 22″, and letter the corners A B C D, as in Fig. 1. The pupils should understand this from their previous

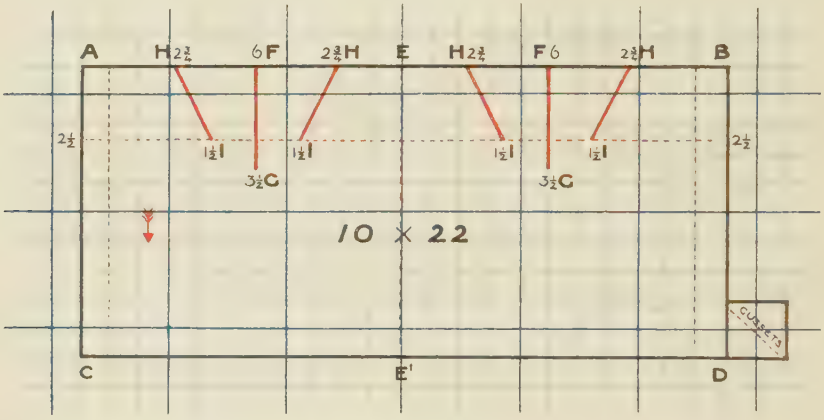


Fig. 1. (Scale $\frac{5}{8}$″ to 1″.)

lessons in cutting-out. If not, explain "field" as the paper on which they are to trace and cut out the shape or pattern.

IV. Elicit what the half of 22 inches is, and along with pupils make a row of dots down the centre of the field, and letter it E E′.

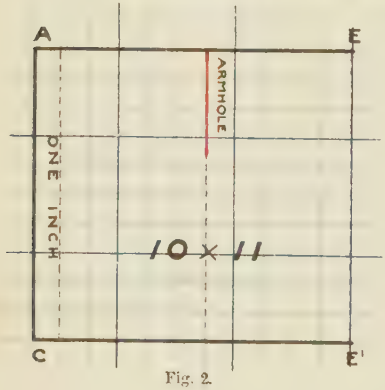


Fig. 2.

V. *Armholes.*—Show by means of the flat pattern that if we fold the garment in two, and cut off 1 inch by creasing at each end A and B, the armholes are exactly in the centre. (Fig. 2.)

VI. Get pupils to count 6 spaces towards the centre from A and B, and call the points F. Elicit that F is 5 inches from E.

VII. Compare the depth of the armholes with that of the whole garment, and get pupils to tell that it is *about* one-third of the whole.

VIII. From F ask the children to count down 3½ spaces, make a dot, call it G, and connect F G with a straight line.

IX. *Bibs.*—Call attention to the bibs (or "flaps", as children call them), and point out that the depth of them is exactly one-fourth of the whole depth, ∴ $2\frac{1}{2}$ inches.

X. Ask pupils to make a row of dots along the whole field, $2\frac{1}{2}$ inches down from A and B, to mark the depth of the bibs.

XI. Show next that from both points F the pupils must measure on each side $2\frac{3}{4}$ inches, make dots, and call each H. Impress on them that there are four points called H, and explain this.

XII. Get the children to measure, on the dotted line marking the depth of the bibs, $1\frac{1}{2}$ inches on each side of the lines F G, and call these points I. Connect H I by slanting lines, and show them from the flat pattern that the diagram is now complete, when an arrow has been inserted to mark the selvedge-way of the material.

XIII. *Transference of Diagram to Tissue Paper.*—Make the pupils measure the tissue paper, when they will find it $10'' \times 22''$, the 10 inches being the selvedge-way of the material.

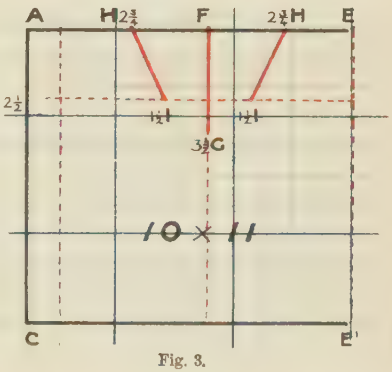


Fig. 3.

XIV. Ask the children to take up the paper, and, holding the short edges between their thumbs and forefingers, double it in two, so that it shall be $10'' \times 11''$, and pinch the double firmly down.

XV. Tell the pupils that, keeping the double to the *right* hand and the open edges to the *left*, they are now to mark off 1 inch by creasing, as in Fig. 3.

XVI. Show the children next how to fold it again, so that it shall be in quarters exclusive of the 1 inch at the open edges.

XVII. Get the children to open this last fold out, and to notice that the centre crease is where the armholes should be, and therefore they mark the top of it F.

XVIII. Ask the depth of the armhole, and get the children to measure off with ruler $3\frac{1}{2}$ inches down the line F, and pencil it in.

XIX. Elicit the depth of the bibs, and get the children to mark this by a crease on their paper, *which is not to be pencilled in.*

XX. Then get the children to measure off the points H $2\frac{3}{4}''$ from F, and also the points I $1\frac{1}{2}''$ from the armhole line, and pencil these lines in.

XXI. Point out that now the children have only to cut three lines with their scissors through the doubled material, namely F G, and the two lines H I, when the garment will be shaped.

XXII. Tell pupils that in order to make the armholes more shapely, as well as stronger, they are to insert two gussets, which they will obtain by cutting a square of 2 or $2\frac{1}{2}$ inches diagonally.

Directions for Making-up the Garment.

I. Fold a narrow hem, $\frac{1}{8}$ inch in depth, round the two front edges and the foot of the shirt; if hemmed, fold on the wrong side; if stitched, fold on the right side.

II. Put a fold of the same depth on the bibs, but if to be hemmed fold on the right side, as they are to lie down.

III. Take the small gusset, and lay down a very narrow single fold along its sides, and a double one along its base.

IV. Lay down a narrow hem on the two edges of the opening left for the armhole.

V. Place the gusset with its apex at the foot of the armhole, and the sides so as to form a counter-hem $\frac{3}{16}$ inch in depth.

VI. Either hem or stitch the two edges of this counter-hem.

VII. Join H to H by a counter-hem, $\frac{3}{16}$ inch in depth, to form the shoulder.

VIII. Either hem or stitch this counter-hem, but as the top is to turn back on to the shoulder, it must be hemmed or stitched one half on one side, and one half on the other.

IX. Finish the armhole by a narrow fold, $\frac{3}{16}$ inch in depth, either stitched or hemmed.

X. If preferred, the armholes may be hollowed out a little, and finished at the foot by a strengthening-tape.

XI. Fasten back the shoulder with a small loop and button.

XII. *Finishing of Shirt.*—Six *groups* of button-hole or blanket stitches are necessary to strengthen the shirt—four where the bibs meet the shoulders,

and two where the slits were made to allow of the front hems of the bibs being turned over to the right side.

Materials.	Width.	Quantity.	Price per yard.
Lawn, fine linen,.....	36″ to 40″	⅓ yard	1*s.* 6*d.* to 2*s.* 6*d.*
Mull or jaconet muslin,.....	„ „	⅓ yard	10*d.* to 1*s.* 6*d.*
Fine calico,.....	27″ to 36″	⅓ yard	6*d.* to 9*d.*
Lace,.....	⅜″	1½ to 2 yards	1*d.* to 6*d.*
Buttons and thread,.....	...	...	1*d.*

HOW TO CUT OUT THE SHIRT BY PROPORTION.

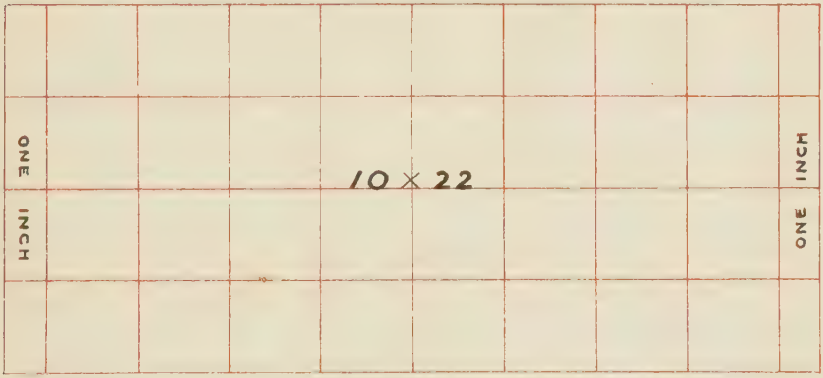


Fig 4.—Material for Shirt.

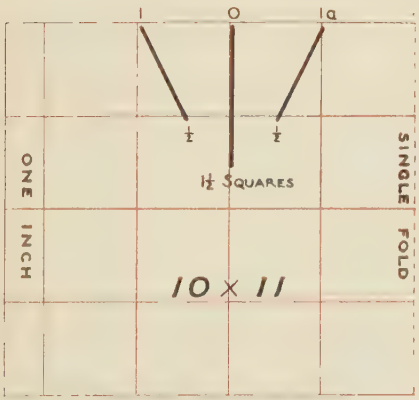


Fig. 5.—Single Fold.

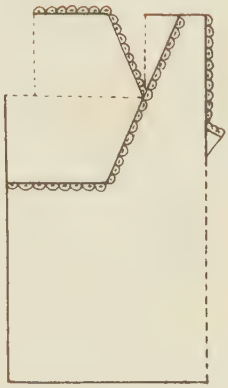
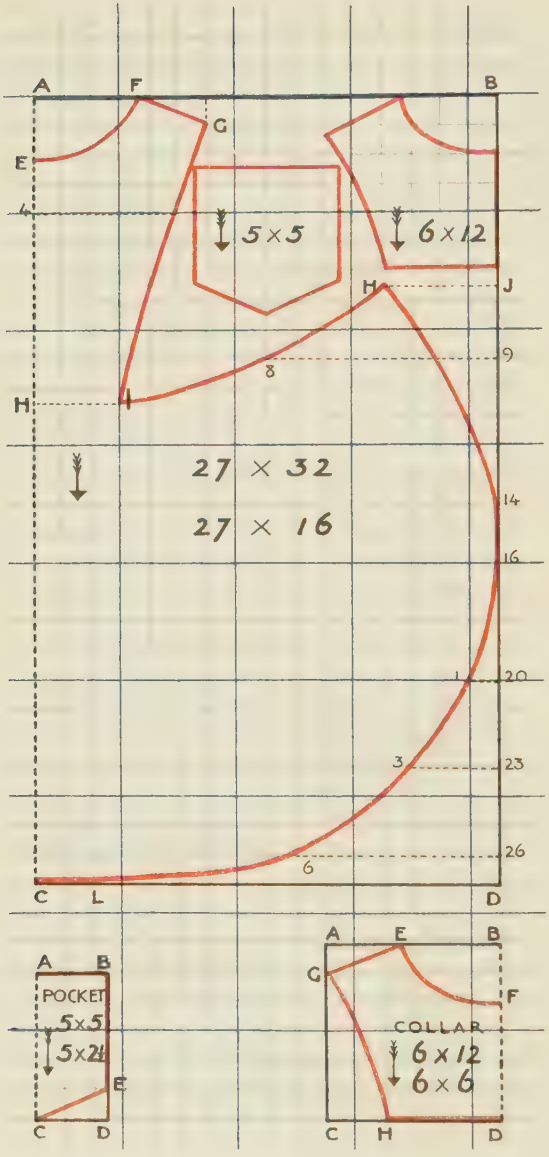


Fig. 6.—Half Shirt made up.



Pinafore for Infants and Class I. Girls.

XIII. *Ornamentation.*—The sleeves and bibs are the parts generally trimmed. Torchon or Valenciennes lace, $\frac{3}{8}$ of an inch deep, is the most suitable trimming. Allow for fulness $\frac{1}{4}$, $\frac{1}{2}$, or $\frac{3}{4}$ as much again as the length of the part to be ornamented, and halve and quarter it so that the fulness may be *distributed evenly*. Whip up the lace (that is, pick up the small open loops that lie along the top margin of the lace) with fine cotton. The needle must be inserted from front to back in picking up each loop, and a whole needleful of loops should be taken before drawing the needle through. When the whipping is done, pin the right side of the lace to the right side of the garment, allowing extra fulness where the four groups of embroidery stitches lie, and at the six corners of the bibs. Then topsew the two edges together. Each stitch should take up one loop if possible.

Explain to pupils that it is more economical to cut several shirts at one time, and also that, as neither cambric (the best material) nor calico can be obtained the exact width required, the extra material must be used for some other article.

Note.—The same pattern might be obtained by folding the material $10'' \times 22''$, as in the foregoing diagrams. (Fig. 4.) (Each space, excluding the 1 inch cut off at the open edges or sides, is $2\frac{1}{2}$ inches square.)

Then double it into halves so as to be $10'' \times 11''$ (Fig. 5), and for the *Armhole* take $1\frac{1}{2}$ squares in depth, and for the *Bibs* cut down for the length 1 square, and for the breadth of the slope $\frac{1}{2}$ square, as in Fig. 5.

HOW TO CUT OUT A PINAFORE FOR GIRLS IN CLASSES I. AND II.

Apparatus.—Holland pinafore, full-sized flat pattern of same on paper, chequered B.B.

Children's Materials.—Scissors, pencil, ink eraser, piece of sectional paper or book, sheet of extension paper or newspaper, ruler, tape line.

This lesson must not be given till a few simple garments, such as the cottage pinafore, the baby's first shirt, have been cut out.

I. *Introduction.*—The teacher, exhibiting the holland pinafore, shows that it consists of four parts, viz. the body, apron, sailor collar, pocket.

Having done so, she next calls the children's attention (1) to its being hemmed all round with $\frac{1}{4}$-inch hem, (2) to the sailor collar being attached to the body by a stitched counter-hem, (3) to the pocket being neatly stitched on, (4) to its fastenings, buttons and button-holes, and (5) to its trimming, which may be either lace or embroidery.

II. *Materials.*—She next tells the children that it is a very neat shape and also very economical, as it can be made out of $\frac{3}{4}$ yard of 32 inches wide material, either holland, print, or muslin; but if sashes be required, 36 inches wide material must be used

III. She then shows the children that, when folded in two vertically, both sides are the same; so that they only require to make a pattern of the half pinafore, and that they have first to make a field for the half body and apron. Explain "field" as the paper out of which they are to trace and cut out the pattern.

Impress on the children anew that their pattern on sectional paper is $\frac{1}{4}$-inch scale.

IV. The teacher will now dictate the following, and do each step along with the pupils on the chequered Black-board. At the same time she should show each part of the garment on the specimen one as she proceeds to draw it in.

1. Draw a field, $27'' \times 16''$, and mark the corners A B C D.
2. Make the left-hand line, A C, a dotted one, to show that when cutting on cloth this must be a double fold.
3. Insert an arrow to mark the selvedge-way of the material.
4. From A measure $3\frac{1}{2}$ inches to right and call it F.
5. From A measure $2\frac{1}{4}$ inches down A C and call it E.
6. Connect these two points with a curved line for the neck.
7. From A measure 6 inches to the right, along A B, and drop a perpendicular line $1\frac{1}{4}$ inch which is to be called G.
8. Unite F G with a slanting line for the shoulder.
9. From A measure down A C $10\frac{1}{2}$ inches and call it H.
10. From H measure towards the right 3 inches and call it I.
11. Join G I with a curved line for body.
12. From B measure down B D $6\frac{1}{4}$ inches and call it J.
13. From J measure towards the left 4 inches and call it K.
14. Unite K I with a concave line for waist.
15. From C measure along C D towards the right 2 inches and call it L.
16. Unite K L with a rounded convex curve for the apron. To assist the children in making this curve the other measurements in the diagram may be given, but are not absolutely necessary.

POCKET.

1. Make a field $5'' \times 2\frac{1}{2}''$, and letter the corners A B C D; A C to be a dotted line to represent fold on cloth, as the diagram is only half the width.
2. Insert an arrow and the size.
3. From D measure up 1 inch along D B and call it E.
4. Unite E C with a slanting line.

SAILOR COLLAR.

1. Make a field 6″ × 6″, and letter A B C D. B D to be dotted for double fold.
2. Insert an arrow and the size.
3. From A measure towards the right, along A B, $2\frac{1}{2}$ inches and call it E.
4. From B measure down 2 inches along B D and call it F.
5. Unite E and F with a curve for the neck.
6. Point out that the upper part of the collar is the same as the upper part of the body, but the front curve is a half inch deeper.
7. From A measure down A C $1\frac{1}{4}$ inch and call it G.
8. Unite E G with slanting line for shoulder.
9. From C measure 2 inches along C D and call it H.
10. Join G H by a curved line for back.

V. Having finished the diagram transfer it to tissue paper along with the pupils as in the first lesson in cutting-out. When finished, point out to them that the pockets and collar may be got out of the $\frac{3}{4}$ yard, also by cutting out the collar in two halves, and making a seam up the back. See diagram.

VI. Show how to baste the parts of the garment neatly together.

THE DUTCH HEEL.

Apparatus.—Specimens of Dutch and gusset heels done in 12-ply fleecy wool, knitting-pins, double Berlin wool, B.B., stocking, *permanent* diagram of the heel.

Children's Materials.—Two knitting-needles and a ball of 4-ply fingering worsted.

Introduce this lesson to the class by remarking that they are now going to learn how to knit the heel of a stocking. Show the two heels, Dutch and gusset, and compare them, the Dutch being rounded like a hood and the gusset being like a triangle.

I. *Why the Dutch Heel is preferred to the Gusset One.*—Explain to the children why the Dutch heel is preferred by many people to the gusset one.

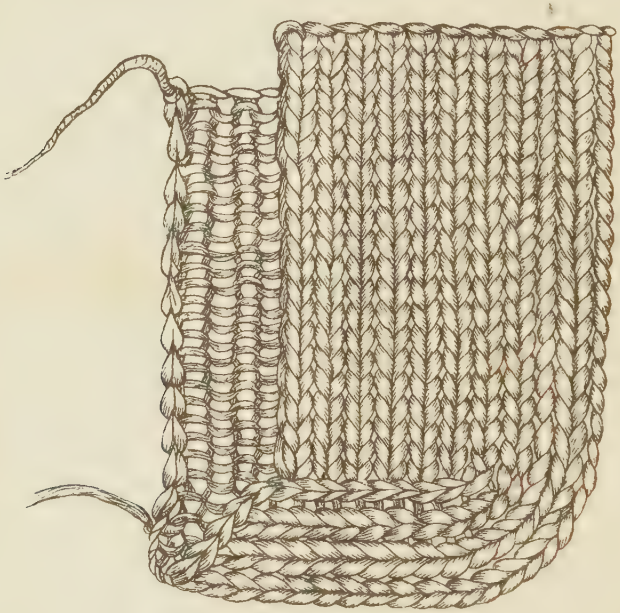
(*a*) It wears well.

(*b*) It is more easily learned by the children than the gusset one.

(*c*) It is also easier to darn.

Tell them that Scotch knitters prefer the gusset one.

II. *Casting-on and Knitting of Heel.*—Before beginning the heel the teacher should explain to the pupils that they may for this exercise use either two or four knitting-needles. Tell them that in this lesson they are to use two. Explain that they must use four needles when doing a stocking, and show how they would divide the whole number of loops between the heel needle and the instep needles. Show a stocking at this stage to illustrate this.



III. Ask the children to take up their ball of worsted and the knitting-needles which lie before them, and cast on twenty-five loops. The teacher will do this likewise with her large pins and wool.

IV. Explain why an odd number of loops is taken for the heel. One loop is required for the back-seam stitch, and there must be an even number of stitches on either side of the seam. In this case there will be twelve on either side, with the odd one in the middle.

V. Tell the children now to knit one row, slipping the first stitch (which they must do in every turn) and purling the thirteenth loop for the seam.

VI. Get the children to tell you that in order to keep the right side of the

stocking the same they must purl every alternate row, so that they will purl 12 stitches, plain the seam stitch, purl 12 and turn. The next row will be plain 12, purl 1, and plain 12. Let the children continue in this way till they have 12 slip stitches up the sides, and have made 23 turns. Here explain that heels of socks, &c. vary in length; many good knitters make them square, while others make them rather longer than they are broad.

VII. Tell the children that they are now going to turn the heel or make the *cap*, and that this is done by decreasings or "intakes". Get the children to tell you that the twenty-fourth row will be a plain one, and on it they are going to make the first intake.

VIII. *How to Turn the Heel.*—Make children plain 12, slipping the first stitch, purl 1, plain 3, slip 1, knit 1, pull the slipped stitch over the knitted one, and *turn*. The teacher will make this clear by using her own apparatus. Get pupils to tell how many are left on the left-hand wire.

IX. As the next row is on the purled side the children will purl 4, slipping the first stitch, knit 1, purl 3, purl 2 together, turn. Test the children's previous knowledge with regard to their intakes.

X. Call attention to the fact that one row of knitting is done between each row of intakes, because they do the decreasings *one* on the *plain* and *one* on the *purl* sides of the knitting.

XI. The next row will be to knit 4, purl 1, knit 3, slip 1, knit 1, pull the slipped stitch over the knitted one, turn. Here explain that the children will all notice the place to make the decreasings by the little *gap* seen between the fourth and fifth loops on either side of the decreasings.

XII. The children may now be told to continue knitting and purling every alternate row till all the stitches on each of the nine middle ones are used up, and then cast off.

XIII. While doing so the teacher will examine the children's work throughout the lesson, and *contrast* the method of decreasing the *heel* with the method of decreasing the *calf* of the stocking. Get the pupils to tell the difference between them.

(1) The decreasings of the calf are always made on the *right* side of the knitting; those of the heel *alternately* on the *right and wrong* sides.

(2) The decreasings of the calf fall *towards* the seam stitch; those on the heel are *turned away from it.*

(3) Several rows of knitting lie between each decreasing of the calf; there is only one row between each decreasing on the heel.

HOW TO PICK UP THE SIDE LOOPS OF THE HEEL AND MAKE THE GUSSET OF A STOCKING.

Materials.—Each child must have 4 knitting-needles with 41 loops cast on, the heel knitted with 10 chain loops up the side, and also the "cap" formed. The teacher must have the same done, but with large pins and 12-ply fleecy or double Berlin wool.

Apparatus.—Black-board and chalk, *permanent* diagram or specimen of the gusset.

I. Introduce the lesson by referring to the Dutch heel they were taught in the last knitting-lesson; and get the class to tell what part of the stocking yet remains to be done, viz., the foot. The lesson they are now to be taught is, "How to pick up the side loops of the heel, form the gusset, and so be able to go on and knit the foot".

II. The teacher must first examine each child's work, and see that they have 10 chain loops up the sides and 11 loops on the wire after the "cap" of the heel is finished.

III. Draw attention to the distance between the heel wire and the instep wires, and thus show the necessity for getting the wires closer to each other, so as to go on and knit round and round. Tell them that this is done by picking up the chain stitches first on one side of the heel and then on the other.

IV. See that every girl has her wool at the *left* end of the "heel wire", then ask them all to place their work on the desk while the teacher knits a few chain loops on to her "heel wire". Caution the girls to take up the under half of the loop. Get one or two of the children to come round and knit a loop or two. Make the class then take up their work, and do as the teacher showed them.

Elicit from the class which side of the heel they have commenced at. Tell them to call this wire "the left-heel needle". Question the class how many loops they now have on the heel wire, viz., 21.

V. Along with the teacher the class must now knit the 20 loops of the "instep wires" on to one wire.

VI. This leaves them with two empty needles, so with one of these they must pick up the 10 chain loops of the right side of the heel. Ask what this needle will be called, viz., "right-heel needle", and how many loops there are on it, and also what must be done to make the number of loops equal, or nearly so, to the "left-heel needle", viz., take 5 off it.

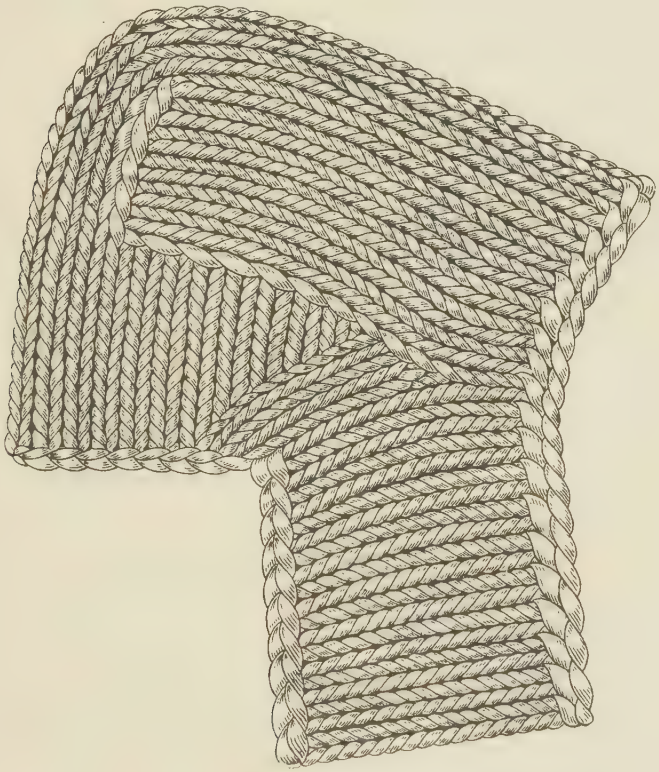


Diagram of the Exercise when Completed.

VII. Examine each child's work to see that it is properly done.

VIII. The class will now see that the wires are all quite near each other, and that it is quite easy to go on and knit.

IX. Ask them to knit one complete round, ending at the "left-heel needle",

and take off at least one loop from each end of the *instep* needle *to prevent holes at corners.*

X. Make all the children count their stitches. Inquire how many they had on their wires to begin with, and then tell them that they must do something to make the 51 loops into 41. Some of the girls will be able to tell that they must take in. Then show by the diagram that it is this decreasing that forms the gusset.

XI. As the class were taught decreasings before, the only things to caution them about are, to notice to make the decreasings at the end of the "left-heel needle" where they take 2 together, and at the beginning of the "right-heel needle", where they slip 1, knit 1, and then draw the slipped stitch over the knitted one.

XII. Tell them to knit two rounds between the decreasings, and knit as many rounds as time will permit.

XIII. Show the large completed heel. Draw attention to the gusset, and tell the pupils it is called so because it resembles the gusset of a shirt in shape.

HOW TO KNIT THE TOE OF A STOCKING.

Apparatus.—Four wooden pins, and double Berlin wool, with 40 loops cast on, diagram of a stocking, a finished toe.

Materials.—Four wires, and ball of 4-ply or 5-ply fingering worsted.

Introduction.—Refer to the previous lessons on the stocking, and tell the pupils they are now to be taught how to make the toe and cast off the end of the stocking.

I. *Number of Loops to be cast on.*—Ask the children to cast on 40 loops, 20 on one wire, and 10 on each of the two others, and knit one or more rounds. The teacher will explain that these rounds are to represent the foot of the stocking, and that 40 loops would be about the number required for the commencement of a toe for a child of six years; about 60 loops for a child of twelve years, and about 76 for a full-sized stocking.

II. *How to do the Intakes.*—The children ought now to be at the commencement of the wire with 20 loops. Tell them to knit 1, slip 1, knit 1, and draw the slipped stitch over the knitted one. They will then require to knit straight on till they come within 3 loops of the end of the wire, when the teacher will tell them to knit 2 together, and then knit 1. Question as to the number of decreasings on this wire, and also as to the reason for knitting the 2 decreasings differently—to make both decreasings lie towards the sides of the foot.

III. The children are now at the beginning of the first wire with 10 loops. Tell them it is done exactly as the first decreasing was done, viz., knit 1, slip 1, knit 1, and draw the slipped stitch over the knitted one. When this is done, ask them to knit to the end of the wire, begin the next wire, and knit to within 3 stitches of the end of it, when they must knit 2 together, and then knit 1. These complete all the decreasings in one row. Question as to the number of them, and show on the finished toe how they all converge to the centre, and thus give the toe its pointed shape.

IV. Tell the children the next row is knitted plain all round, the third one is done exactly as the first was, the next one plain, and so on, alternately, till they have 20 loops left on their 3 wires. The children will knit till they reach this point.

V. *How to Close or Finish off the Toe.*—The teacher will then explain that the toe is now to be ended off, but it must be closed first. Ask the pupils to knit the 5 loops on the third wire on to the other needle with the other 5, so that the loops will be on two wires. To close it, they must knit the first loop on the first wire, and the last loop of the second wire with 10 loops (which will be exactly opposite each other) together. The teacher will show this, and then go on demonstrating how we knit 1 loop on the front wire, and 1 on the back one together, till there are 10 loops left, all on one wire. The toe is then said to be closed.

VI. Tell the children to knit this row, and then to begin and cast off, when the toe will be finished.

The ends of the wool must be darned in on the wrong side by the children. Show diagrams of the other methods of forming the toes of stockings.

HOW TO DARN A HOLE (COMMON METHOD).

Apparatus.—Piece of stocking-web done in 12-ply fleecy wool sewn in to an ordinary slate frame to show the cutting and preparation of the hole. Another piece similar to show the stranding and darning of hole, or the web of P.P.A. Suitable darners and worsted to contrast well with the web. Specimen done in 12-ply fleecy wool, with blue or crimson grounding, and the darn in white. Diagrams.

Children's Materials.—Stocking-web 3 inch square. Darners and suitable worsted. No. 8 between needle and 40 cotton thread.

Introduction.—Remind the children of the first rule in darning, "Never wait for a hole". Explain that a hole cannot always be avoided, and that therefore they must know how to darn one when it does occur.

I. *Preparation of Material for Darning.*—Tell the children that there are two ways of preparing the web, one method for fine material, the other for coarse, such as for 4-ply or 5-ply worsted stockings, and that it is the latter they are to learn first, as it is more practical than the former. Show the specimen in coarse wool. Ask the girls to lift their pieces of stocking-web with the right side towards them, and to cut one loop about the middle of the piece.

II. The teacher will demonstrate this and each of the other steps with the coarse web before the class, and dictate the following:—

(1) Open out this thread towards the left side until you have two clear loops. Do the same towards the right. There are now four complete loops above, and three and two halves at the foot. Point this out on the diagram, and explain it very clearly, showing that the loops above are not opposite those beneath, but that *each loop above faces a space beneath*, and each *loop beneath faces a space above.* Examine the work of the class to see if they have done this properly.

(2) Turn round your work until you have the four complete loops nearest your thumb. Put your darner between the second and third loops under the connecting thread, and pull out the four loops. Cut this thread in two halves.

Rows (3) and (4). Repeat No. 2.

The hole will now be about $\frac{1}{2}$ inch square, and the children will have four threads coming out from each side of it, one from each row.

(5) Ask the children to turn to the wrong side, and show them how to draw these threads to the right side. Tell them to pass over two threads from the hole, put the needle through the opening of the web, thread the needle with one of the short ends, and carry it through to the right side. Repeat this with each of the threads. These are to be cut off after the darn is finished.

The work will now appear as in Fig. 1.

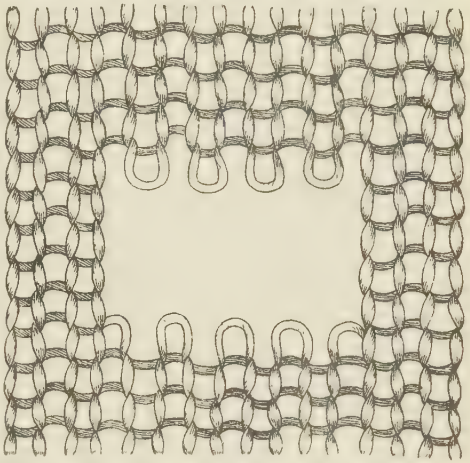


Fig. 1.

Stranding.—It is seldom necessary to draw the loops together in a hole prepared in this way, but the children may be taught how to do it.

III. *Darning of Hole.*—Tell pupils that as in Class IV. they are to *darn the thin place round about the hole* (imaginary in this case), and also that the darn is to be in the form of an octagon. Get pupils to give the second principle of darning, "Avoid a straight edge", and ask them to name some other shapes they might make it of.

IV. Show the large specimen, and get the children to tell from it that the hole when darned looks like a piece of lattice work on the right side, and that it is darned on the wrong side. Get them to hold their work as in Class IV. darn, and show them on P.P.A. web that they begin as before on the left side, *about* $\frac{1}{2}$ *inch from the prepared hole.*

V. Ask the children to take up four *up*-loops on needle, the first one to be exactly on a line with the foot of the side of the hole. Remind them that in going up they take *up*-loops, in coming down, *down*-loops. Do each row along with the children.

VI. Get pupils to tell the length of loops to be left at each row, and the reason for leaving them.

These points they should know from the Class IV. Darn.

VII. On coming to the hole, show the children that they must now go even across, without increasing, till they come to the other side of the hole. Ask

them, if they have eleven loops on the first row covering the hole, how many they will have for second, &c. Show them that the preceding rows must to some extent be a guide to them for the taking up of the loops—the first, third, fifth, seventh, &c., being the same, the second, fourth, sixth, eighth, &c., the same.

VIII. Impress on, and demonstrate to, the children (1) that if the needle

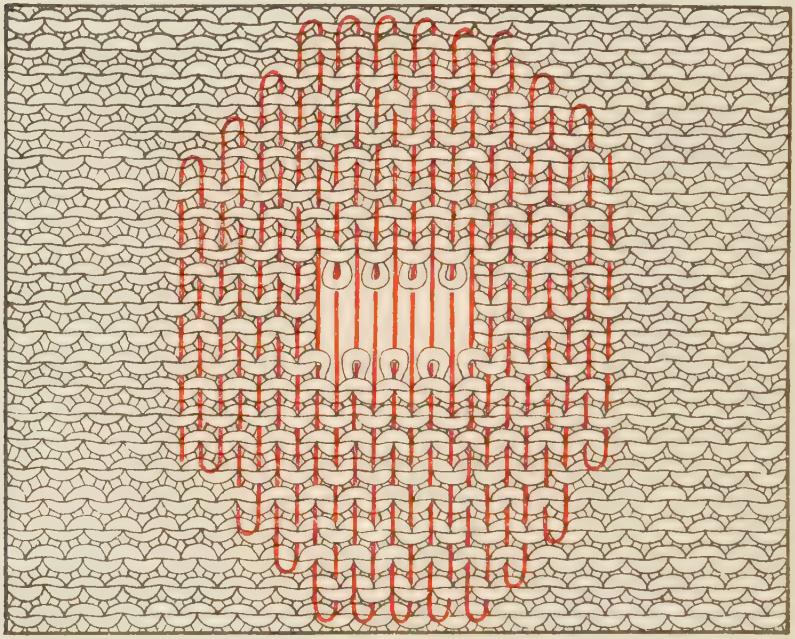


Fig. 2.

passes through a loop on the *under* row at the foot of the hole, it must enter a space on the *upper* row at the top of the hole, and *vice versâ*.

(2) That the needle must go *through* the centre of the loop at the top and bottom of the hole, and not split them.

For this purpose the children must turn to right side and look if they are really going through them.

(3) That they must not contract the hole when they are going across it.

Having crossed the hole make the children decrease till they have four loops. (Fig. 2.) Examine each child's work to see if they have done this accurately.

IX. *Crossing the Hole.*—Show from finished specimen that these warp threads, not being sufficiently strong, must be crossed again.

Before doing so, ask the children to cut the connecting or stranding threads out if any were used.

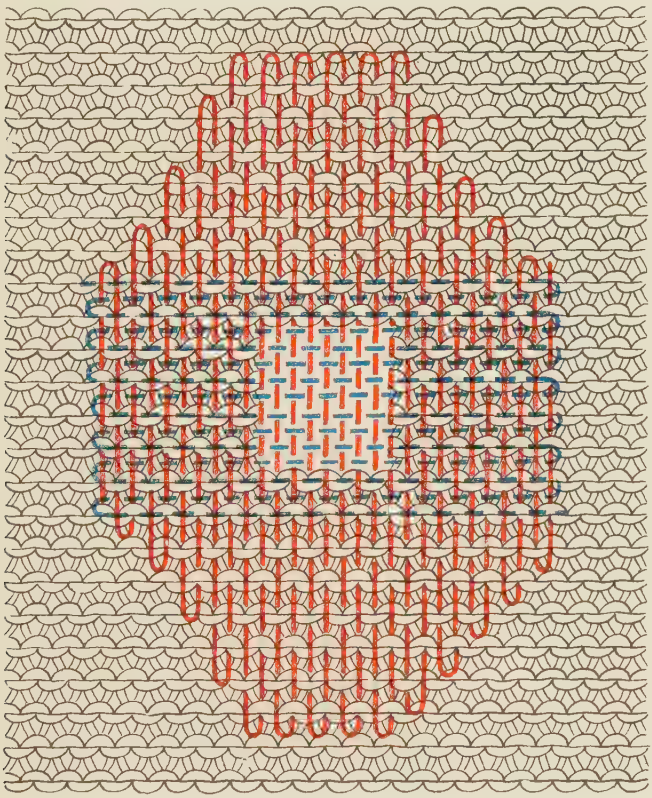


Fig. 3

Get them to turn their work, so that what was at the top and bottom is now at the sides.

On coarse web show them how to begin two rows above or beneath the hole (explain the reason), and at the edge of the darn, taking up alternate threads, *not of the stocking-web* this time, but *of the darning thread*, till they reach the other edge. Use the *eye*, not the point of the needle, at this stage.

X. For the second row, show the children they must go down, taking up the threads which were passed over last time. Avoid taking *two* rows together.

XI. As before, show that the third row will be the same as the first, and the fourth the same as the second. *See that pupils do not split threads.*

Allow the children to go on till they have done two or three rows below the hole; the darn will then be complete.

Fig. 4.—Right Side of Darn when Finished.

XII. Examine and comment on the faults observed.

(1) Warp darning irregularly done.

(2) Loops too long or too short.

(3) Stranding threads across the hole too tight or too loose.

(4) Crossing of darn uneven, some having too many rows and others too few.

(5) Whole darn puckered and untidy.

Note.—Class V. Darn will require at least three lessons.

(*a*) The preparation of the hole.

(*b*) The first crossing of the hole.

(*c*) The second crossing of the hole.

In addition to this the children will require much practice in actual darning.

FIRST LESSON IN MARKING.

THE STITCH.

Apparatus.—B.B. Diagram of marking-stitch and alphabet. Demonstration Frame.

Children's Materials.—Sampler of cheese-cloth or Java canvas 6 inches square, hemmed neatly round, needle with ingrain scarlet or blue cotton.

I. Introduce by referring to handkerchiefs getting mixed, and being given to wrong owners on coming from the laundry or after washing. Ask the

reason for this, and how it may be prevented by having all garments marked with the owners' names.

Mention, or get pupils to mention, *different ways of marking*:—

1. Writing the name with marking ink. This often burns holes in the garment.

2. Drawing the letters in pencil, and then stitching or chain-stitching them.

3. Simple marking by cross stitch.

Specimens of marking in eyelet-hole stitch, true marking and queen stitch, may be shown, but are too difficult at this stage. (Fig. 1.)

Fig. 1.

Eyelet Hole. Simple Marking. Queen Stitch.

Tell the children that they are in this lesson to learn the third way—simple marking or cross stitch,—and that they should always use ingrain cotton, because it does not lose its colour, owing to its having been dyed before it was twisted.

II. Show diagram of the stitch, or draw a few stitches on B.B., and get pupils to tell what they resemble. Because each stitch crosses a *square of two threads* (Fig. 2), the stitch is often called cross stitch.

Fig. 2.

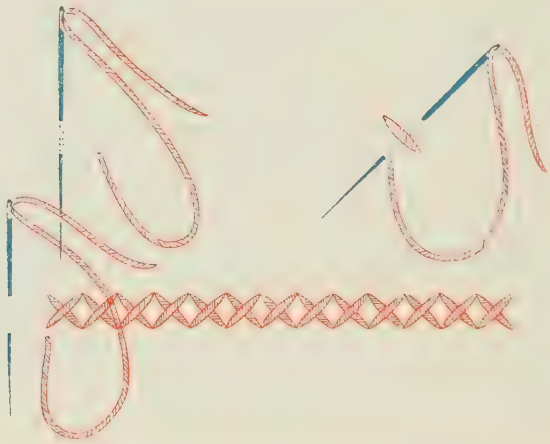
III. Tell the pupils that they might begin at the left or right hand of their squares of canvas, as the stitch may be worked both ways, but that for

convenience they are all to begin four threads from the top and four threads from the *right* side.

IV. On Demonstration Frame show the children that they are to bring through their needle from back to front, leaving a finger-length of cotton to be afterwards finished off. Get pupils to do this, then put down their work and attend while you make a few stitches on the Demonstration Frame.

V. Work a stitch on the frame, giving the following directions:—

(1) From the place where the thread comes out, count two threads up and



two to the left, and put in the needle, taking two threads downwards in a straight line, which makes half the stitch. Get one or two pupils to do this on the Frame. (Fig. 3.)

(2) From the place where the thread comes out count *up* two threads, and two to the right, put in the needle, and bring it out again in the same hole as it came out last time. (Fig. 4.)

Get several pupils to do a whole stitch on the Frame.

Now make pupils take up work and mark two or three stitches.

VI. Call attention to the fact that the last half as well as the first must always be in the same direction.

VII. Examine to see if the children are doing it accurately. Let them work a row all round their squares of canvas.

VIII. When the children come to the end, show them how to finish off their thread by darning in the thread on the wrong side for one or two stitches, and then cutting it off.

Ask them to finish off the thread they left at the beginning in the same way, and then impress on them that marking is always done on the *right side*, and on *single material*.

Remarks on Marking Samplers.

I. After the pupils have worked all round the square, let them divide it into spaces for the letters by doing rows of the marking stitch. Show them that there must be eighteen threads at least left between the foot of one row and the beginning of the other. Get them to calculate this.

Each capital letter is 7 stitches in depth	=	14 threads.
2 threads between the top of the letter and the row	=	2 „
2 „ „ foot „ „ „	=	2 „
		18 „

II. Draw diagrams of variations of the stitch for the different rows, or do them on the Demonstration Frame. (Fig. 5.)

III. *Letters.*—Having got the sampler divided, give the children a lesson

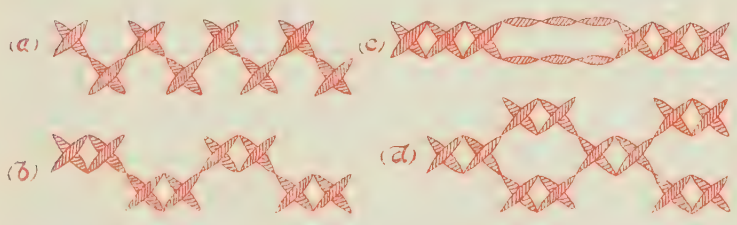
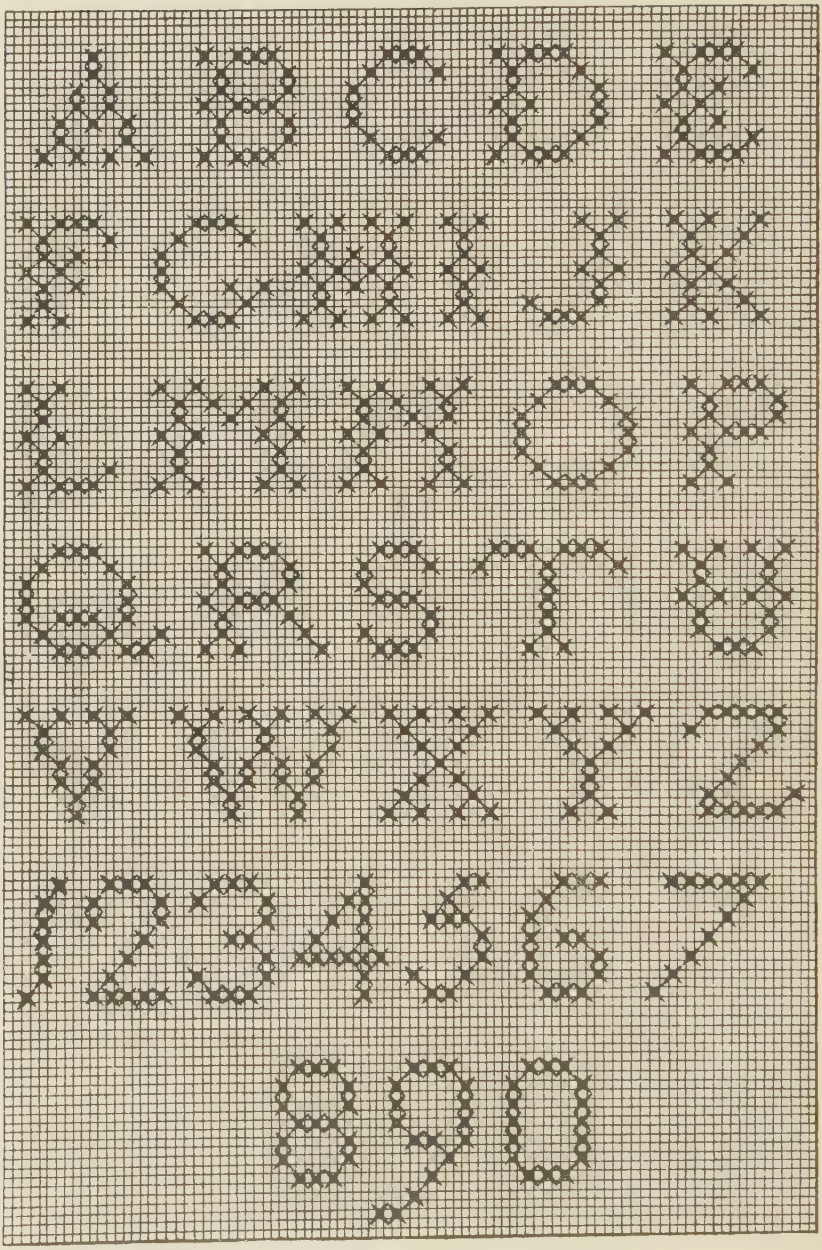


Fig. 5.

on "I", as it is the foundation of several letters, and then on E H L O T in the order of difficulty—H L E T O.

(1) Draw "I" on the B.B., or show a diagram of it. (Fig. 6.)

(2) Work it on the Frame, stitch by stitch, along with the children, and trace it on B.B.



(3) Impress the following points on the pupils:—

1. Each letter is seven stitches high.
2. Each stitch is crossed the same way, *i.e.* the upper half of the stitches must all lie either from left to right or right to left.
3. No knots must be used in marking.
4. Each letter must be begun and finished by itself, *i.e.* there must be no connecting threads between letters.
5. At least one, but generally two, stitches must be between the letters.
6. If the capitals are initials, a cross stitch should be placed between each to indicate a full stop.

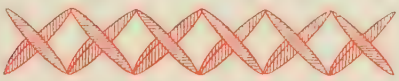
Fig. 6.

IV. Get the children to make a diagram of the letters in small crosses on their slates, and then in their note-books, to be reproduced from memory at some future time.

V. In Class VI. the children may do a sampler of all the letters on Saxony cloth, and be allowed to practise the marking of letters and figures on handkerchiefs, underclothing, and table-linen, &c.

HOW TO WORK "TRUE MARKING"

Fig. 1.



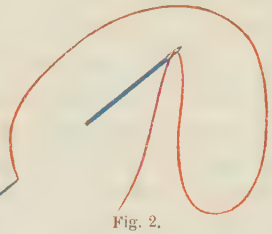


Fig. 2.

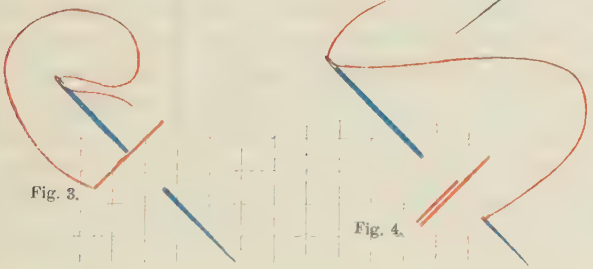


Fig. 3.

Fig. 4.

Fig. 1.—Appearance of Stitch.

Fig. 2.—First Position of Needle.

Fig. 3.—Second Position of Needle for Half Stitch.

Fig. 4.—Third Position of Needle.

Give them a few simple rules for this—

(1) Handkerchiefs should be marked at the left-hand top corner below the hem.

(2) Household linen should be marked at the left-hand top corner below the hem, or in the centre, immediately below the hem.

(3) Chemises, night-dresses, shirts, immediately under the front folds.

(4) Drawers, immediately under the band in the front.

The diagrams on page 139, figs. 1 to 4, show the method of working "Brave Bred" stitch or "True Marking", which ought only to be taught to the most advanced pupils in schools or to students in training colleges, as it is most trying to the eyesight.

HOW TO FINISH THE FRONT OPENING OF A CHEMISE.

Apparatus.—Chemise with opening in front, ditto with closed neck-band, paper pattern of the top part of chemise (Fig. 1), the paper to be crimson on one side and white on the other, strips of same paper for front pleat or fold, scissors, needle, and B.B.

Children's Materials.—Tissue paper pattern of top part of chemise, strips for front pleat or fold, needles, No. 50 or 60 thread, &c.

Introduction.—Refer to the chemises they made in Class IV., with closed neck-band, or show such and contrast it with a chemise having an open front.

Explain that some people prefer them open, and tell the children that they are now to be taught how to finish the open front.

I. *Cutting of Opening.*—Explain to the class that the opening is made either exactly in the centre of the front, or $\frac{1}{4}$ inch more may be allowed to the left side to allow for the hem taken off.

II. *Length of Opening.*—Tell the children that 5 inches is *generally* the length on a full-sized chemise, but that they may be made of any length. The teacher must now cut this down before the class, and then, having got the pupils to make a crease, or a pencilled line, to mark the centre, get them to cut it down. Draw attention to the fact that there are two sides to be

finished, and give the rule for the buttoning of ladies' underclothing, *i.e.* right over left.

Ask the children to lay down their work in front of them, with the lower end of the front opening nearest them.

Explain that the left side of the opening when lying before them will be the right side when the garment is *on* the person. Get them to write "right" on the side opposite their left hands, and "left" on the side opposite their right hands.

III. *How to Finish the Left Side of the Opening.*—Tell the class that the left side may be finished in one of two ways. Either by a false hem or a

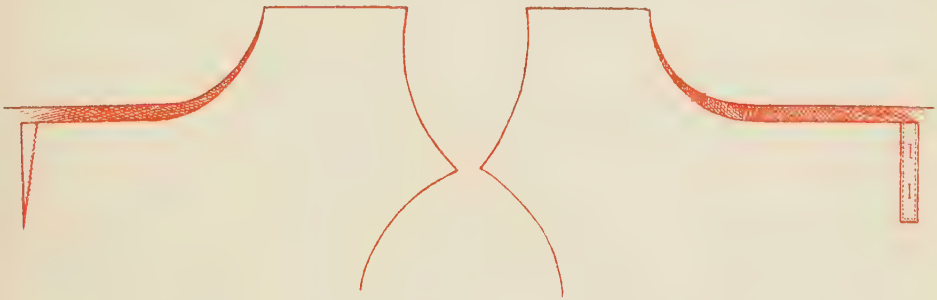


Fig. 1.—Left Arm Side with Sloping Hem.

Fig. 2.—Right Arm Side with Fold.

double fold $\frac{3}{4}$ inch wide when finished, or, if preferred, by making a hem of about $\frac{3}{8}$ inch wide at the top, and sloping down to $\frac{1}{8}$ inch at the bottom. Tell them they are to do it in this lesson by the sloping hem. (Fig. 1.)

Fold this hem on the coloured paper before the class, and then get the pupils to fold theirs and baste it.

IV. *How to put on the Fold or Pleat on the Right Side.*—Make class measure the small bands of paper which they have got, when they will find that they are $5\frac{1}{4}$ inches long by $1\frac{3}{4}$ inches broad. Tell them that this is to form a pleat on the right side, which when finished will be about $\frac{3}{4}$ inch wide. Show them how to lay a fold $\frac{1}{4}$ inch deep along one of the short ends of this strip. With large specimens show them how to place the fold on the right side of the garment, and crease it so that $\frac{3}{8}$ inch shall project beyond the openings and overlap the left side.

Get the children to lay a fold $\frac{3}{8}$ inch wide towards the under side of the pleat, and then baste it down on the garment. (Fig. 2.)

V. *Sewing of Pleat or Fold.*—Explain that the pleat is to be finished either by a row of stitching or feather-stitching down each side about ¼ inch from the edge.

The foot of the pleat will be stitched across on to the garment, and strengthened on the wrong side by a few button-hole stitches. If preferred, the foot of the pleat may be pointed. Illustrate the pointed end on the B.B.

VI. Tell the pupils that if the front fold be made of lace or embroidered insertion it must be ornamented with its edging before it is fastened to the garment. Show how to do this. Explain to them by specimens that the opening might be finished by a fold put on in various other ways.

THE PREPARATION OF A CROSS-WAY BAND FOR THE SLEEVE OF A CHEMISE.

Apparatus.—Quarter of chemise in white paper (full size), square of paper (pink, 16 inches), small chemise with cross-band on, B.B., and coloured chalk.

Pupils' Materials.—Quarter (woman's size) of chemise in paper, square of paper 16 inches, tape-line, needle, No. 50 or 60 thread, scissors.

Note.—This cross-way band is to be turned to the *right* side, but a lesson should also be given on one turned to the wrong side.

Introduction.—Show a chemise with the exercise done, and explain that the sleeve might be finished off in various ways—namely (1) by a hem turned to the right side and feather-stitched or stitched, (2) by embroidery with a false hem inside, (3) by buttonhole or blanket-stitch, and (4) by a cross-way band, as here.

I. Explain why the band has to be on the cross or bias for this purpose. Show that a straight selvedge-way band would not lie evenly on account of the shape of the sleeve, which is curved.

II. Get the pupils to measure round the sleeve with their tape-lines to find what length of band will be required.

III. Tell the children to lay their paper squares flat on the desk, and fold them diagonally as in Fig. 1. They must then make a crease along the diagonal, and cut the square in two. Show by doing it, and by a diagram, how to fold the remaining triangle in two, and then get them to do that, and pinch a crease along the double part. (Fig. 2.)

IV. Along this crease get the children to measure $\frac{7}{8}$ inch, or more if a wider fold is wanted, and lay a fold there parallel with the edge of the

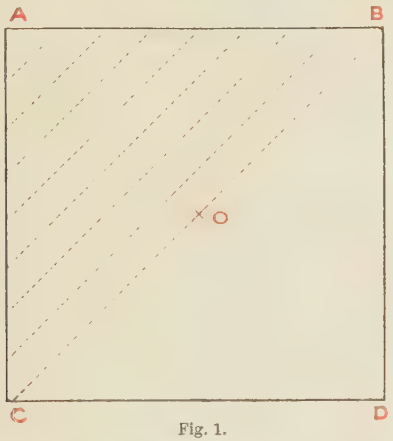


Fig. 1.

Fig. 2.

triangle represented by the line B C. (Fig. 2.) They must then cut along this fold D. Explain why they measure the depth of the fold *along the selvedge* and not along the cross edges.

V. Then make the children lay a fold $\frac{1}{8}$ inch deep along one side of the band towards the wrong side.

VI. After showing the children carefully how to do it, get them to place the middle of the band to the top of the sleeve with the *right* side of the band to the *wrong* side of the sleeve; pin it, and baste it round. Explain that in calico this would be back-stitched.

VII. Make the children turn the band over on to the right side of the chemise, and, folding it so that the seam will not be seen, baste it down close to the edge. (Fig. 3.)

VIII. The children must now cut off the projecting parts at the seam, leaving $\frac{1}{8}$ inch at each end of the seam to fold in. Tell them that in calico this would be joined by a sew-and-fell seam, or better by stitching on the

wrong side before being put on, and then flattened down. In paper, make them fix it neatly by basting.

IX. Explain that in calico the band would be finished by two rows of

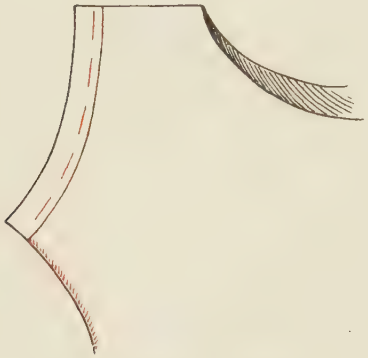


Fig. 3.—Right Side of Garment.

Fig. 4.—Right Side of Garment Finished.

stitching or feather-stitching, one close to the edge of the fold, and one $\frac{1}{8}$ inch from the edge of the sleeve. (Fig. 4.)

X. After the pupils can do this well on paper, make them do it on a sleeve,

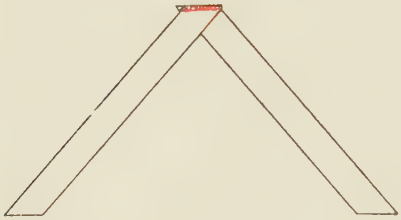


Fig. 5.

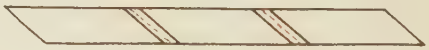


Fig. 6.

which can easily be cut from a piece of cloth $18'' \times 6''$, and then allow them to finish the sleeves of their chemises.

XI. Shew the children that the cross-band could easily be obtained from the calico curved out of the neck and sides of the chemise, by joining several strips together.

XII. Explain how these strips must be joined together by putting the long points to the short ones. (Figs. 5 and 6.)

XIII. Tell the pupils that the false hem might have been folded to the wrong side, and hemmed down if preferred.

FLANNEL SEAMS.

Apparatus.—Specimens of the various kinds of seams done in flannel with coloured wool, the herring-bone stitches to be at least 1 inch in size. Flannel garments to show the uses of the various seams; four pieces of flannel or paper $15'' \times 6''$ to show the placing of the seams.

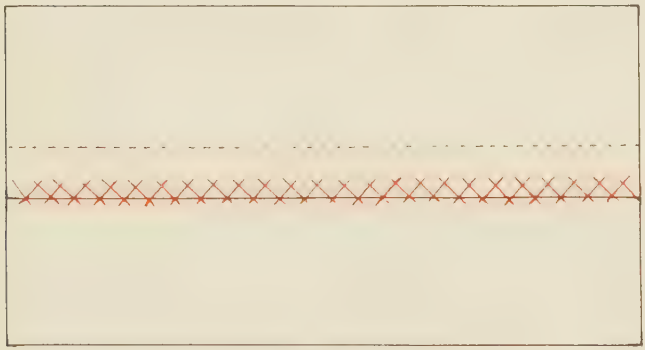


Fig. 1.

Pupils' Materials.—Four pieces of flannel $3'' \times 1\frac{1}{2}''$, pins, needles, and No. 50 scarlet thread.

Introduction.—Question pupils as to the different kinds of seams in calico, and then tell them they are to be taught now how to do seams in flannel. Show the sheet with the three specimens of flannel seams, and tell them they are to be taught all these, so that they may be able to choose the most suitable one for the various garments they will have to make.

First Method.

I. Call attention to the first specimen, and then draw a diagram of it on the B.B. (Fig. 1.)

II. Tell the children that this is the seam generally used for petticoats.

III. Ask pupils to take up two of the pieces of flannel, and find (1) the right side, (2) the selvedge-way, (3) the way the nap falls. The teacher will do this with her apparatus, and show them how to place a pin in each piece to mark these three things. Tell them to suppose each piece a width or breadth of flannel.

IV. Show the pupils how to place one width thus marked on the desk with the right side up, and the other width with the wrong side uppermost,

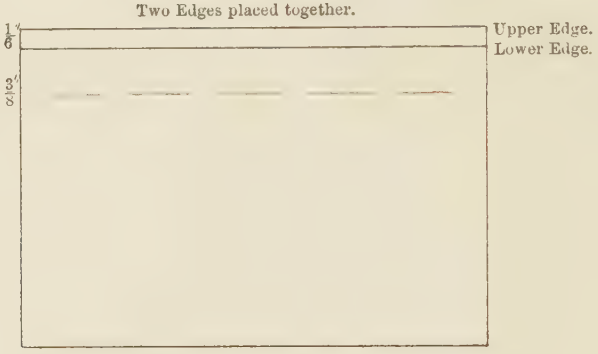


Fig. 2.

the edge of the second or upper width to be $\frac{1}{6}$ inch below the first or lower one.

V. Get them to baste these two widths together, $\frac{3}{8}$ inch below the topmost edge. (Fig. 2.)

VI. The teacher must now, with her own specimen, show the children how to run these together, beneath the basting thread. Impress on them that they must only run three stitches, and then take a backstitch. Explain to them how to do this. When *running*, they take up say *three* threads and pass over *three*, but when they wish to make a backstitch, they should, *before making it*, take up *six* threads, and *go back over three of these*, and bring out the needle three threads *in advance* of the *backstitch* just formed. The stitches will then be regular.

VII. When the running is completed, show pupils how to place the left hand under the seam, and turn the deeper of the seams over the underlying one.

VIII. After having tacked it, show the pupils how to herring-bone it, and

impress on them that they must be careful to bring through all the stitches to the right side.

Take out the tacking threads, and show the children how to press it down flat.

Second Method.

Seam for vests, bodices, infants' flannels. Show the second seam Fig. 3, and explain that it is most suitable for garments which require very flat seams, such as bodices, &c.

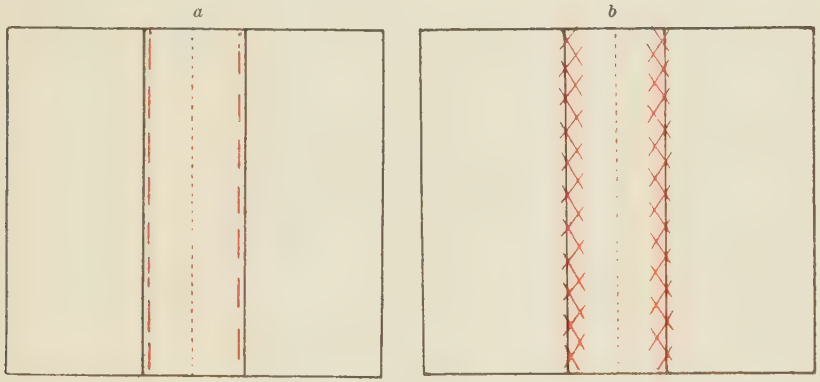


Fig. 3.

I. Get the pupils to proceed as before till they come to the placing of the edges together.

Two Edges placed together.

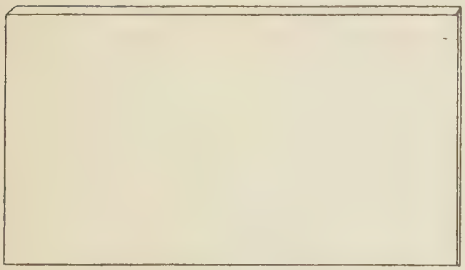


Fig. 4.

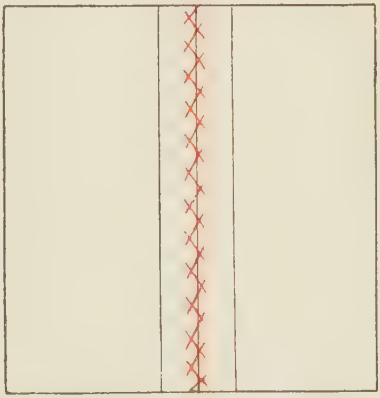


Fig. 5.

II. Tell the children that this time they must place the two edges quite closely together, as in Fig. 4, tack them about $\frac{3}{8}$ inch from the edge, and run them as before.

III. When the running is finished show the children how to flatten it by turning the single edges to the right and to the left, and after having tacked them, herring-bone each side.

Third Method.

I. Get the children to proceed as in "Second Method", as far as the herring-boning. Then show them that, instead of herring-boning down both the edges, they simply herring-bone the centre of the seam, as in Fig. 5.

Impress on them the fact that this is the least satisfactory of all the seams.

Tell the pupils that when they have to join two pieces of flannel together, one being on the cross and the other the straight or even (as a gored side of a petticoat, on to one of the straight sides of the front), the running and back-stitching must be done on the cross side, and the cross side must be herring-boned on to the straight side. Show them specimens of both ways, and impress on them that, though the specimen with the straight side herring-boned on to the cross side looks *prettier*, it is *wrong in principle.*

HOW TO MAKE A PLACKET-HOLE IN A PETTICOAT.

Apparatus.—Finished petticoat, B.B. with coloured chalks, piece of paper or flannel 8 inches square.

Pupils' Materials.—Piece of flannel or paper 6 inches square, small card tape-line, needles, and scarlet thread No. 40, &c.

Introduce the lesson by showing the pupils the back opening in the petticoat.

Tell them that while in Scotland this opening is called a "fent", in England it is called a placket or plaquet hole.

Explain that the word placket was used in Shakespeare's time for the petticoat itself.

Both words seem to have been derived from the French: "fent" from *fente*, a slit or opening, and "plaquet" from *plaquer*, to lay or clap on.

I. *Length of Placket.*—Before speaking of the length, remind the children of the three things they had to mark on their garment when patching on flannel—right side of material, selvedge-way, and the way the nap falls. Question a little on these lest they have forgotten them, and get the children to mark them with a pin on their flannel.

Show by specimens that the length of the placket varies—

(1) According to the size of the garment—whether a child's or a woman's petticoat.

(2) According to the depth of the waistband of the garment. If a narrow waistband, the placket must be longer than if it were a deep, circular one.

II. Ask the children to suppose their garment to be a full-sized petticoat with a deep circular band.

III. Get the children to find the centre of their flannel weft-way, and to cut down $\frac{3}{8}$ inch to left of centre 5 inches. Illustrate this on B.B., and remind them of the rule, "Women's garments fasten right over left".

IV. Tell the children to turn their garments to the wrong side. Here demonstrate to them that the left-hand side of the opening on the wrong side is the right-hand side when on the right side, and make them mark *R* on the side opposite their left hand, and *L* on the side opposite their right hand.

V. *How to Fold the two Sides.*—Show the petticoat, and elicit from the pupils that the opening is finished by a broad hem on the right-hand side, and a narrower one tapering to a point on the left-hand side.

VI. *Right-hand Side.*—Draw on B.B. the depth of the fold they are now to place on the side marked *R*. Tell them it varies in width from $\frac{3}{4}$ inch to $1\frac{1}{2}$ inch. Here ask them to fold down 1 inch.

VII. *Left-hand Side.*—Draw on B.B. and lay down on specimen a fold $\frac{3}{8}$ inch at top, and tapering to a point at the foot, and get pupils to do the same (Fig. 1). Explain also that the folds may be left straight if preferred.

VIII. *Sewing of Placket.*—Show the finished petticoat, and elicit that the folds are herring-boned. Get the children to herring-bone it, and tell them that if the petticoat were of calico the folds would simply be hemmed or stitched with the machine.

IX. Impress on the children that the herring-bone stitches must come through to the right side of the petticoat. (Fig. 2.)

X. *How to Finish the Foot of the Placket.*—Ask the pupils to turn their garments to the right side, and having folded the broad hem over the narrow one, secure the foot of the placket-hole firmly by two rows of chain or plain

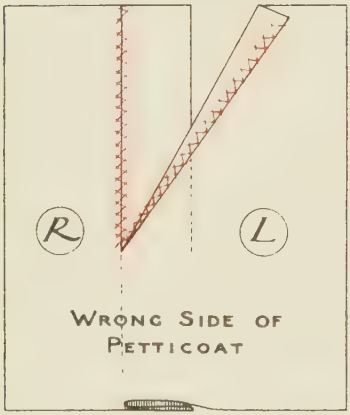


Fig. 1.

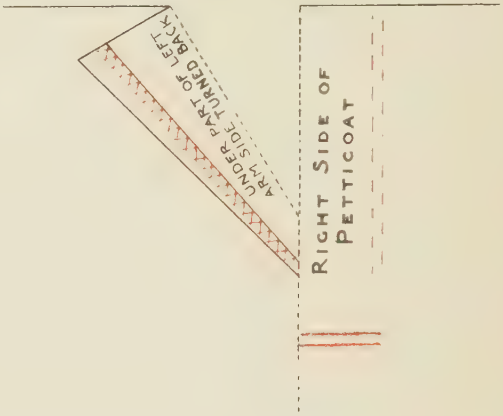


Fig. 2.

stitching. Draw this on B.B., or do it before the pupils with chain stitching on the coarse specimen. (Fig. 2.)

Tell the children that to make the foot still more secure they must strengthen it on the wrong side of the garment with a few "blanket" stitches, or put on a *straight* strengthening tape.

"PIPING" OR "CORDING MATERIAL".

Apparatus.—Two pieces of coloured material, such as Turkey-red cotton, cut in cross-way strips, a garment to show "piping", piping cord, needles, thread, scissors.

Pupils' Materials.—Piece of calico 6″ × 2″, and strips of material cut on the cross, cord, &c.

I. *Introduce* the lesson by showing piping on some garment, as an overall. Show that its use is to give a finished appearance to an edge, as on the neck and waist of a child's frock or the neck and armholes of an under bodice. It may also be placed between the edges of seams to strengthen or give "finish" to them.

Explain that material on the cross or bias is used for piping because it stretches nicely, and so can be used to finish off a curve.

II. *How to Join Strips on the Cross.*—The children having been taught in a previous lesson how to cut on the cross, must now be shown how to join strips cut on the cross, so as to make them the required length. With her own apparatus the teacher will show the pupils (1) how to place the strips with the right sides together, the long point of one strip being to the short point of the other. (Fig. 1.)

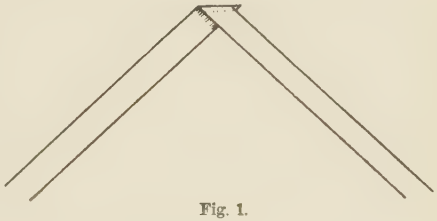


Fig. 1.

(2) How to run them together a little distance from the edge.

(3) How to cut off the projecting ends.

(4) How to flatten the seam down.

III. *Putting in the Cord.*—The teacher will demonstrate with her own

Fig. 2.

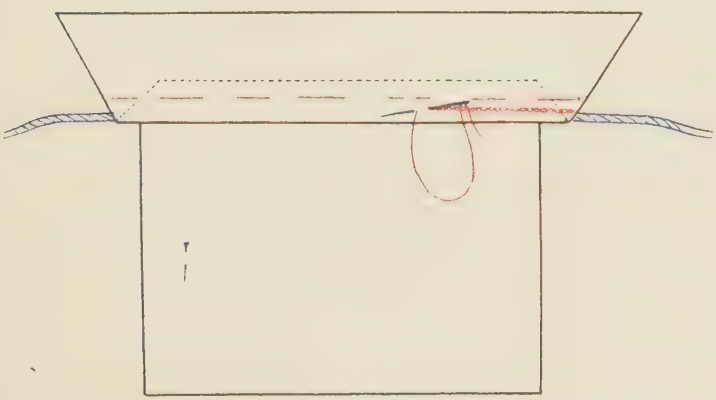


Fig. 3. Garment (Right Side).

materials how to place the cord on the wrong side of the strip of cross-way material, about $\frac{1}{4}$ or $\frac{3}{8}$ inch from the edge; how to fold the edge of calico over

the cord; how to press the cord closely up to the folded edge; and how to tack it securely just under the cord through the two thicknesses. See Fig. 2, which should be sketched on the B.B.

IV. *Sewing of Piping on to the Garment.*—Tell the pupils to turn the corded edge towards themselves, and placing the piping *wrong side downwards* on the *right* side of the garment, about $\frac{1}{4}$ inch from the edge, leave a piece about $\frac{3}{8}$ inch long beyond the right edge of the garment. Show the pupils how to tack it securely in place, and then stitch it firmly through the three folds, just above the cord. (Fig. 3.)

V. Show the pupils now how to fold the cording *backwards* to the *wrong*

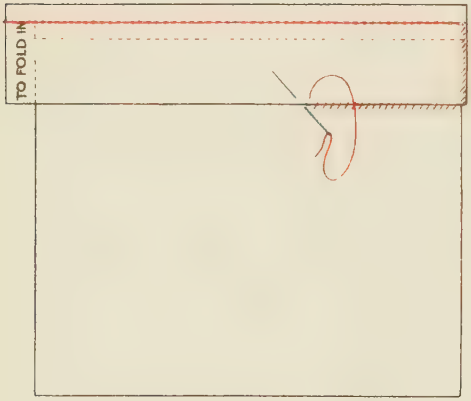


Fig. 4.—Garment (Wrong Side).

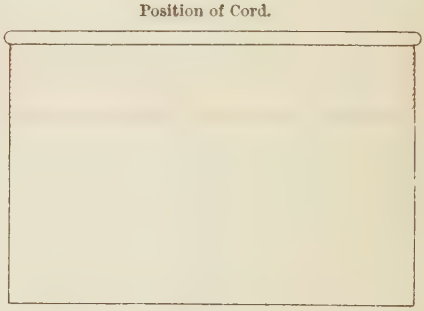


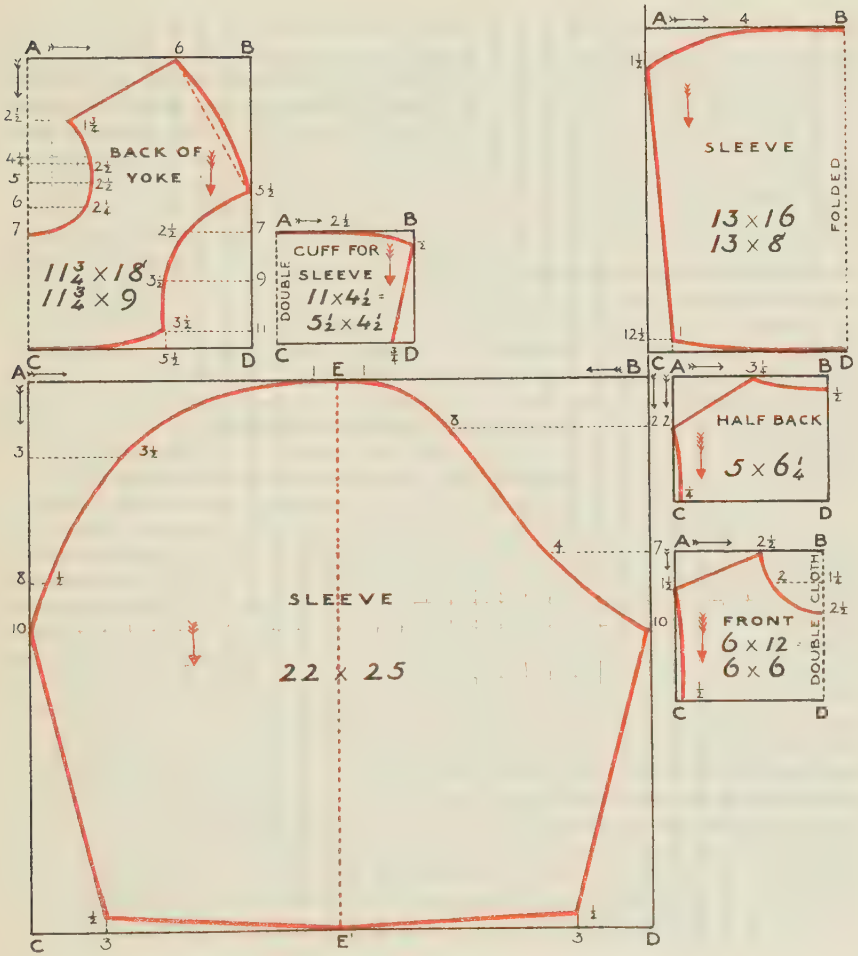
Fig. 5.—Garment (Right Side).

side, taking care to flatten it down well, and to press the garment evenly against the top, so as to make the cord stand up at the edge. Get them to cut the short edge of the cording even, and the cord also. Tell them to allow for turnings at the *short* edges, and fold these under. If a draw-string is to be inserted, hem down the turnings, else they will fray out.

To finish off, get the pupils to lay a narrow fold $\frac{1}{4}$ inch deep along the lower edge of the strip, and hem it down so as to form a false hem to it. (Fig. 4.)

Explain that if the garment were lined the stitches would be only taken through the lining, and not be made to shine through as in Fig. 5.

Illustrate each stage of the lesson by coloured diagrams on the B.B.



BLOUSE AND SLEEVE OF OVERALL FOR GIRL FROM 7 TO 9 YEARS OF AGE.
BLOUSE AND SLEEVE OF OVERALL FOR GIRL ABOUT 5 YEARS OF AGE.

(1) For skirt 2 or 2½ widths of material 36 inches wide will be required.
(2) The length from *neckband* should be about 29 inches, but will vary with height of the girl who is to wear it.
(3) The sleeve may be finished with a plain band, if preferred, about 8″ × 1″ when finished.

PREPARATION OF TUCKS.

Apparatus.—Sheet of lined paper to represent calico 5 inches square, and cardboard tape-line (scale for both 4 inches to the inch), pinafore (tucked selvedge-way and weft-way), or any garment to represent this, specimen of exercise done in Java canvas (scale 4 inches to the inch), tucking sheet of P.P.A.

Children's Materials.—Tissue paper or soft calico 5 inches square, cardboard tape-line $\frac{3}{4}$ inch broad and 4 inches long, needles, and suitable thread.

Introduction.—Introduce the lesson by showing the tucked pinafore. Draw attention to one of the tucks.

I. Give the *Definition.* A tuck is a fold of cloth kept firmly in its place by a line of running, hemming, or stitching, whereas a pleat is fastened at the ends only. Elicit the various *uses of tucks.*

(1) Tucks are used for ornament, as on babies' robes and frocks.

(2) They allow for the shortening and lengthening of children's garments, as flannel petticoats, frocks, &c.

(3) They serve to hide a join in a garment when it requires to be lengthened by fresh material. A tuck falling over the join prevents the garment looking patched.

(4) They are used instead of gathers to narrow garments, as in night-dresses, chemises, &c.

II. Explain that tucks are sometimes required to run *with the selvedge,* as on the front of a night-dress or chemise, when used to narrow the garment, and sometimes *across or weft-way,* as on drawers, petticoats, &c., when used to shorten and lengthen. Tell the children that they are to make their tucks run with the selvedge, as they are more easily fixed thus than when running across the materal.

III. *Hem of the Specimen.*—Make the class take up their pieces of calico, find the selvedge-way, and turn down the raw edge $\frac{1}{4}$ inch deep. The teacher must do this on her sheet of paper.

IV. Ask pupils to take up their small cardboard tape-line, and with large one demonstrate to them how 1 inch, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$, $\frac{1}{16}$ inch are represented on it. Get them to point out various lengths smartly and accurately on their own tape-lines.

V. Then show the specimen exercise on Java canvas, and point out by measuring it with the tape that it consists of a hem $\frac{3}{4}$ inch deep, and two tucks each $\frac{1}{4}$ inch deep, with $\frac{1}{4}$ inch between, the scale being 4 inches to 1 inch. Explain this. Tell the children that their exercise is to be exactly the same.

VI. With lined paper, tape, and darner, show the children how to measure up from the edge $\frac{3}{4}$ inch, which they are to mark by pricking a hole with

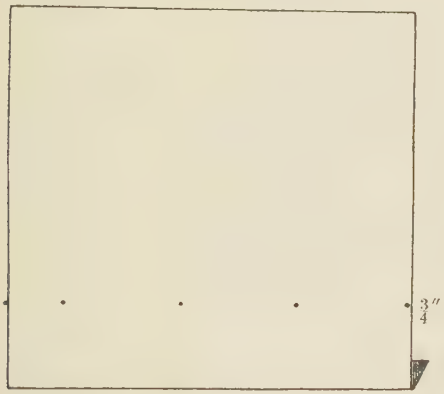


Fig. 1.

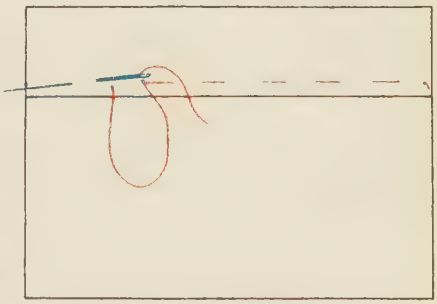


Fig. 2.

their needles. (Fig. 1.) Then show them how to transfer the tape over 2 inches towards the left, prick another hole, and so on to the end of the cloth.

VII. Show how these pricked holes are to serve as a guide for folding the hem on to the wrong side.

VIII. Having folded, baste the hem down along with the children $\frac{1}{8}$ inch from the edge. (Fig. 2.)

IX. *How to Prepare the First Tuck.*—Show from specimen that the first tuck is to be $\frac{1}{4}$ inch in depth, and that its edge is to be $\frac{1}{4}$ inch above the hemming stitches. Now get the children to calculate how far up they will have to measure for the folding of it.

Hem $= \frac{3}{4}$ inch
Space between $= \frac{1}{4}$ „
Space to lie on $= \frac{1}{4}$ „
Depth of tuck $= \frac{1}{4}$ „
$= 1\frac{1}{2}$ inch.

Write this on B.B. Ask the children to show $1\frac{1}{2}$ inch on their tape-line. Now show them how to place the mark $1\frac{1}{2}$ inch against the edge of the hem,

Fig. 3. (Scale $1\frac{1}{8}$" to 1").

and prick two rows of holes, one at the top of the measure, the other $\frac{1}{4}$ inch lower down. (Fig. 3.)

Tell them to continue these two sets of needle-pricks at the same distance from the hem along the whole length, 2 inches to be between each pair.

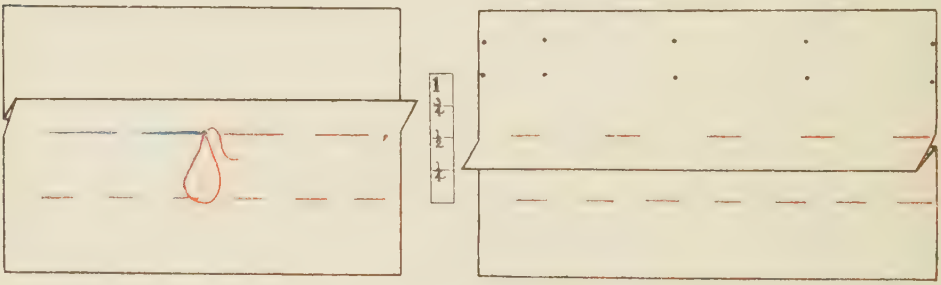


Fig. 4. (Scale $1\frac{1}{2}$" to 1") Fig. 5.

X. Make the children fold by the upper row, and baste by the lower one where they are to run. Show them on paper sheet how to baste it, taking

long stitches on the under side and short on the upper. (Fig. 4.) Make them fold the tuck flatly down with thumb and forefinger.

How to Prepare the Second Tuck.

For second tuck make the children calculate again, and write it on B.B.

Depth of first tuck = $\frac{1}{4}$ inch
Space between the tucks = $\frac{1}{4}$ „
Space to lie on = $\frac{1}{4}$ „
Depth of second tuck = $\frac{1}{4}$ „
} = 1 inch. (Fig. 5.)

XI. Show the children next how to place the 1-inch mark against the edge of the first tuck, and as before prick two holes, one at the top, the other $\frac{1}{4}$ inch down, and fold, baste, and flatten down as before. Impress on them that if they had a long piece to tuck they should mark a small piece, then baste, &c.

XII. Before proceeding to the running of the tucks make a few remarks on tucks:—

(*a*) *Size of Tucks.*—Explain that tucks are made both wider and narrower than $\frac{1}{4}$ inch.

Garment.	*Width of Tucks.*
Babies' robes and camisoles, ...	$\frac{1}{8}$ to $\frac{1}{4}$ inch.
Frocks, ...	$\frac{3}{8}$ to 1 „
Chemises and night-dresses, ...	$\frac{1}{8}$ to $\frac{1}{4}$ „
Drawers, ...	$\frac{1}{4}$ to $\frac{3}{4}$ „
Flannel petticoats, ...	1 to 2 inches.

(*b*) *Space between Tucks.*—A space must always be left, so as to show the running or stitching. For narrow tucks the space between = the depth of the tuck, for wider ones = a space decreasing according as the width increases; thus, $\frac{1}{2}$ inch tuck requires $\frac{1}{4}$ inch space, 1 inch tuck requires $\frac{1}{6}$ inch space.

(*c*) *Arrangement of Tucks.*—They are arranged according to taste in groups of three or four, with a broader tuck or a space to be ornamented between, or they may be all of one size.

SEWING OF TUCKS.

I. Tell the pupils that they may sew the tucks in various ways—(*a*) By Running (the best way); (*b*) by Hemming (in lower standards); (*c*) by Stitching (considered a waste of time and eyesight, *if done by hand*).

II. *Running Stitch.*—Do a few running stitches on the D.F. (Fig. 6), or make a diagram on B.B. Ask what stitch they learnt in Class IV. somewhat like it—Gathering.

Fig. 6.—Running Stitch.

III. Get pupils to tell that while in Gathering they passed over twice as many threads as they took up, in Running they pass over exactly what they take up. The rule generally given is: pass over two threads and take two; but this *must vary* according to the fineness of the material. Practically we pass over two on the under or wrong side, and take three on the right one.

IV. Tell pupils that they may run either on right (upper) or wrong (under) side of tucks. Government examiners require them to be done on the under side. Explain why. If done on upper side pupils are not always careful to bring the needle through both folds, and therefore the tucks are not securely fastened.

V. *Commencement of Running.*—With P.P.A. show pupils how to raise one of the tucks, insert the needle between the folds at right-hand side, and

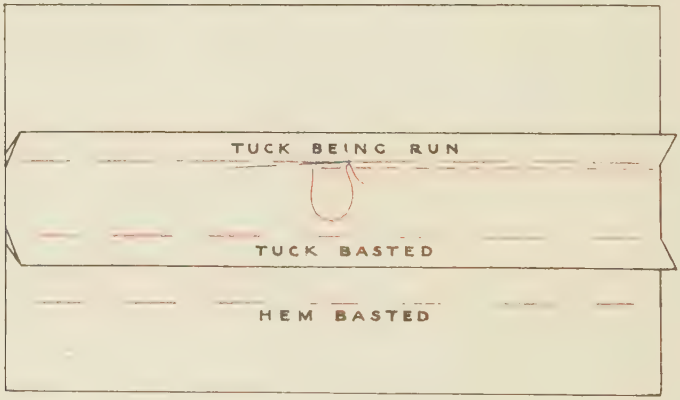


Fig. 7.

bring it out on the under side. Then take three small back stitches, two going through the *under* fold only, and the last one going through both folds. Ask pupils to do the same. (Fig. 7.)

VI. *How to Hold the Work.*—Now tell the children to hold the work over the first and second fingers, and keep it in place with the thumb and the third finger.

Proceed on P.P.A. to the middle of the tuck. Get pupils to do the same either immediately above or below the basting thread. Examine the pupils' work to see if they are doing it accurately, and tell them that if the material be stiff they can only do one stitch at a time; if it be soft and loose in texture, the children may take two or three.

VII. *Joining on Thread.*—On P.P.A. show how to end one thread off by taking a back stitch on *under* fold, slipping the needle through between the folds and cutting off the thread.

VIII. Show how to commence new thread by slipping the needle between the folds, and bringing it out ¾ inch to the right from the last running stitch made. Show how to take a small back stitch, and run over the last stitches made, but *only on the under fold.* Get the children to do this, proceed as before, and finish off as they did at the join; only to make it more secure they may take two or three back stitches.

Examine and comment on the faults noticed.

(1) Puckered tucks—the cotton having been drawn too tightly.

(2) Inaccurate and insecure joinings.

(3) Irregularity of stitches—some too big, others too small, and some not properly brought through to upper side.

Note.—In subsequent lessons the girls should be allowed to arrange the tucks in different ways, and also be permitted to fix and run them on garments.

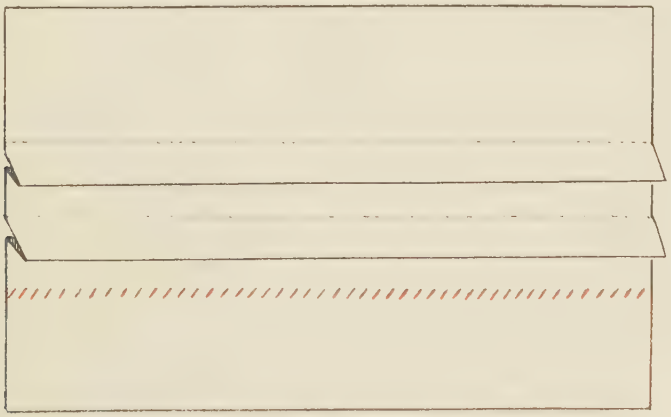


Fig 8.—Exercise Finished.

CALICO PATCHING.

Apparatus.—Large paper garment 28 inches square; paper patch 22 inches square; pins; specimens of patches (calico) at various stages of preparation; calico patch; sheet of P.P.A.; torn garment and patched one.

Pupils' Materials.—2 pieces of calico 4 inches square and 3 inches square; small pins, needles, and suitable thread.

I. *Introduce* the lesson by referring to the pupils having been taught the Flannel Patch in Class IV. Show them the specimens in calico, and tell

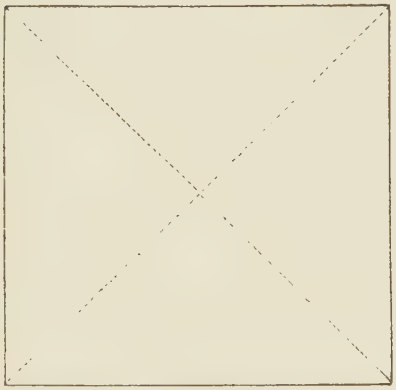


Fig. 1 *a*.

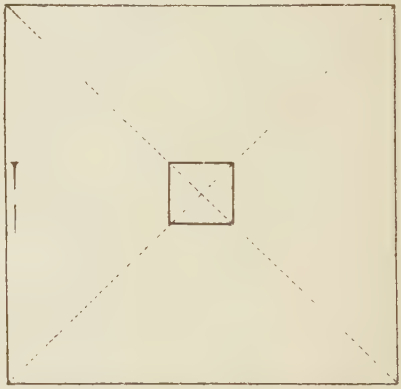


Fig. 1 *b*.

them they are now to be taught how to put on one in cotton or linen articles. As the other name for cotton is calico, the patch is generally styled the Calico Patch. Tell the pupils that there are various ways of patching calico, but this is the simplest method. Show the torn garment and the patched one, and show (1) that it is more comfortable to wear a patched garment than a torn one.

(2) That Patching or Mending is one way of showing thrift.

Call the children's attention to the two pieces of calico lying in front of them. Ask them to show the piece representing the Garment and the piece to be used as the Patch.

The children should know this from their Class IV. work.

Preparation. Cutting the Hole.—Draw a Diagram representing the garment, with diagonal lines across it. (Fig. 1*a*.)

Show how to obtain these. Tell the children to hold the garment as a diamond with thumb and forefinger of left hand. Then take up the other corner with thumb and forefinger of right hand, and place both corners together so as to form a triangle. (Fig. 2.)

Show the children how to do this on the large paper patch, also how to press the *base* of this triangle for one diagonal. Then show them how to put the two ends of this base together to form another triangle (Fig. 3), and having creased *its sides* for the other diagonal cut off the apex (Fig. 4), and open it out, when it will appear as in Fig. 1 *b* without the pin.

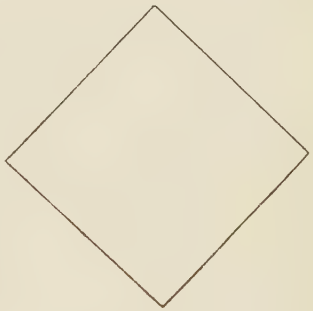


Fig. 1.

II. Tell the children to mark the right side and selvedge-way with a pin, and do the same before them on the large paper garment. Question them as to how they find these two points.

III. The teacher must now pin her garment on B.B., and make the children put theirs on the desk with the right side *downwards.*

Fig. 2.

IV. *Patch.*—Ask the children now to take up their patch, and finding the right side and selvedge-way, place a pin *in the centre.*

V. Now show the children with the paper patch how to turn the *right* side towards them, and lay a fold all round $\frac{1}{8}$ inch in depth. Remind them that they must always fold opposite sides, and not fold right round, or they will not get their corners to lie flat.

Fig. 3.

Fig. 4.

VI. Next show the children how to put the patch on to the garment with (*a*) the right side downwards, (*b*) the middle of the patch to the middle of the garment, (*c*) the corners of the patch touching the diagonals, and (*d*) the edges of the patch straight to a thread.

Place the pins as in the flannel patch. (Fig. 5.)

VII. Get the children to baste the patch all round *four* threads from the edge; not two, as in the flannel patch, since the hemming stitch will extend

up two threads, and the basting and hemming stitches must not interfere with each other. (Fig. 6.)

VIII. *Preparation of the Right Side.*—The teacher should turn her garment to show right side, and ask the class to do the same.

She should now show the children how to put the scissors into the hole

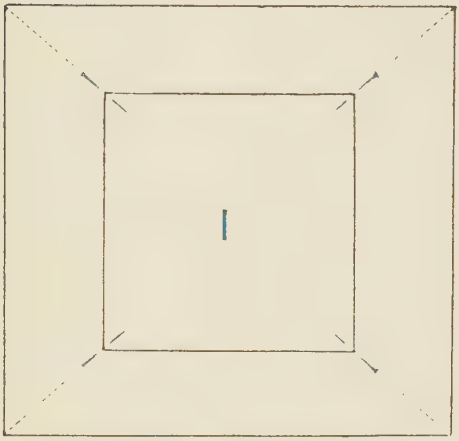


Fig. 5.

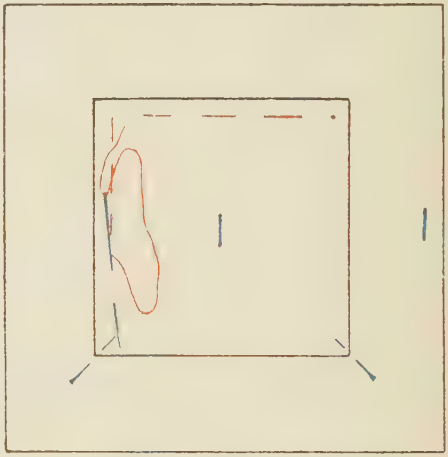


Fig. 6.

and cut up the diagonal lines towards each corner, leaving $\frac{3}{4}$ inch uncut. Before cutting, she should ask the pupils to take their small tape-lines, and measure on diagonal $\frac{3}{4}$ inch from the corner of basting thread, and mark each with a small hole. (Figs. 7 and 8.)

The teacher must then get the children to cut off these thin parts evenly to a thread (Fig. 9), after she and two pupils have cut the square on the large paper patch. Now explain that they must mitre or snip each of the four corners. (Fig. 10.) Make the children prick another hole at each corner $\frac{3}{16}$ inch up, and then cut. Explain $\frac{3}{16}$ inch as more than $\frac{1}{8}$ inch and less than $\frac{1}{4}$ inch. Show this on diagram and patch.

Lay the folds along with the class, and baste all round. The complete preparation will be seen in Diagrams 6, 7, 8, 9, 10, 11, which should all be drawn with coloured chalks on B.B. as the lesson proceeds.

IX. *Sewing of Patch.*—Tell the class that they have no new stitches to learn, as the patch is to be seamed on the right side and hemmed on the

wrong. If the calico be thin, or if the garment and patch be of *muslin*, the patch may be *hemmed* or felled on both sides.

Question the children as to the manner of beginning seaming, and do it on P.P.A., beginning at the middle of one side. Finish both seaming and hemming by slipping the needle in between the patch and the garment and drawing it out so as to avoid showing the join.

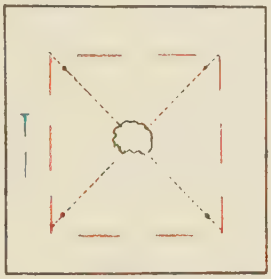


Fig. 7.

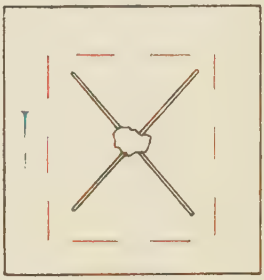


Fig. 8.

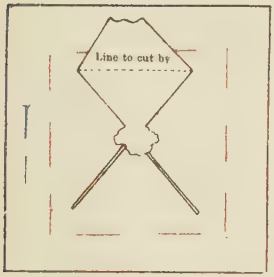


Fig. 9.

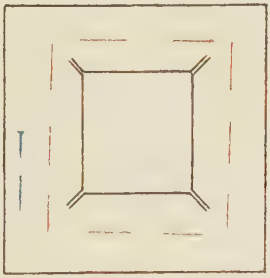


Fig. 10

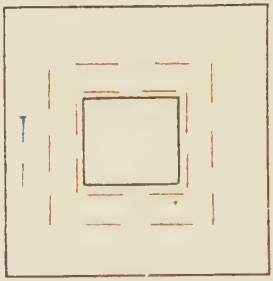


Fig. 11.

Show them that the difficulty lies in the corner, which must be made very secure. Do a corner on the P.P.A., showing that they must go four times into the corner hole. (Fig. 12.)

X. When the patch is finished on the right side and flattened down, tell the children to turn to the wrong side and hem round, beginning at the middle of a side. Show them how to do the corners by bringing out the needle for the last stitch of a side two threads from the corner, bringing the thread right over the corner, and bringing it out at the same hole. (Fig. 12.) Then turn the work and go on to the end. Examine the pupils' work, and draw attention to the faults observed.

XI. Remind the pupils that they should keep the *good parts of old garments* to patch with, and also that if new calico be used it should be washed

to take out the "dressing", and so cause less strain on the worn material. Tell the pupils that there are *other methods* of patching in linen and calico

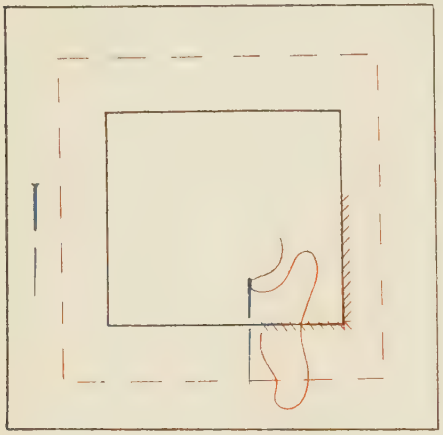


Fig. 12.—Seaming of Patch.

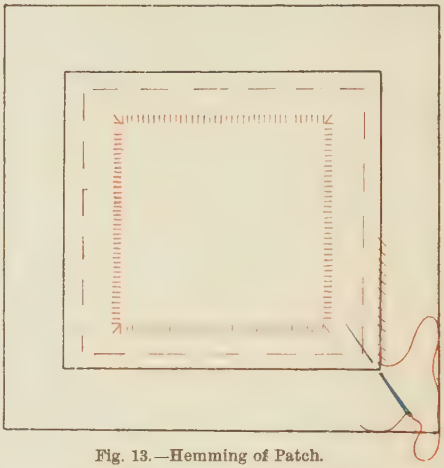


Fig. 13.—Hemming of Patch.

equally good, but that this method has been chosen for them because it is simple as well as satisfactory.

Diagrams 14 and 15 show the right and wrong sides of the patch when finished.

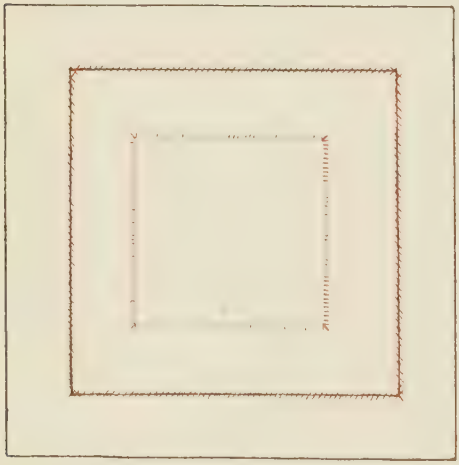


Fig. 14.—Complete Patch (Wrong Side).

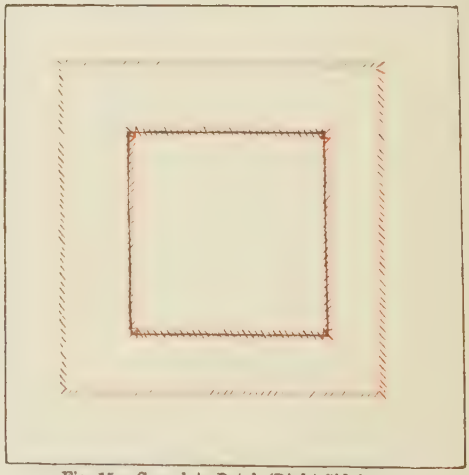


Fig. 15.—Complete Patch (Right Side).

N.B.—For General Remarks on Calico Patching, see page 278.

PRINT PATCHING.

Apparatus.—Specimens of print patches done in different ways and at different stages; piece of paper 28 inches square, with a pattern on it to represent garment; ditto 22 inches square to represent patch; print patch of P.P.A. to show stitches required.

Children's Materials.—1 piece of print 5 inches square; 1 piece to match 3 inches square; pins, needles, and suitable thread. (Simple patterns, such as a checked or dotted print, should be given first, afterwards a leaf or flower.)

Introduction.—Show a piece of print, and tell pupils that print is just a loose textured calico with a pattern on it. Elicit from pupils what mother would do if she found a hole in her print apron—get her print cuttings, select one to match the garment, and patch it. Remind pupils that the cuttings of print and other garments should always be kept to mend them. Tell pupils that if the garment be faded the *new print should be washed* before being put on.

I. Call the attention of the pupils to the two pieces of print with which they have been provided, and ask them to take up the one representing the garment, and cut a hole in it as they did in the calico patch.

II. *Preparation of Garment.*—Get the children to find the right side of it. Make them observe that the pattern is not so clearly seen on one side as it is on the other. Tell them that the side on which the pattern is most easily distinguished is the right side.

III. Ask the children to put in a small pin to mark the right side and selvedge-way of the garment, as they did in their calico patch. The teacher will put in a black-headed veil pin into her paper garment.

IV. Make the children lay their garment on the desk with the right side *upwards* and the selvedge running up and down. Contrast this with the calico patch, which was laid with the right side downwards. The teacher will pin up the paper specimen on the B.B. in the same way.

V. *Preparation of Patch.*—The teacher will now take her paper patch and show the children (1) how to place the pin in the centre to mark the

right side and selvedge-way; (2) how to turn down a fold $\frac{3}{8}$ inch deep on the wrong side of the patch. Here remind them of the rule, "Always fold opposite sides", and get them to tell you the reason for doing so.

VI. Show the children how to place the patch by taking the paper one and placing its wrong side to the right side of the garment, with the selvedges of both going the same way. Here impress on the children the necessity for

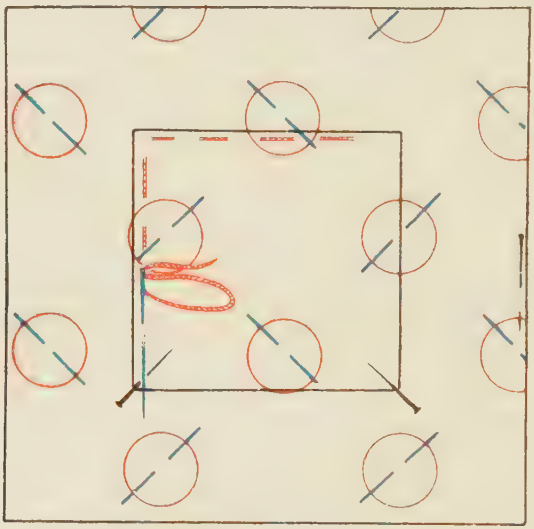


Fig. 1.

matching the pattern well, and tell them that, as the patterns are not always evenly printed, it is sometimes not possible to match the pattern, and *at the same time have the patch lying even to a thread*, although this ought to be done as far as possible. The *pattern must be matched*, nevertheless, whether the threads of the patch and garment run evenly together or not. When the patch has been pinned on to the garment draw a diagram on B.B., and show them where the fixing threads are to go. (Fig. 1.)

VII. *a. Seaming of Patch on to Garment.*—Call the attention of the pupils to the specimens of patching, and get them to tell you what stitch is used for the right side.

Seaming.—With P.P.A. show the children how, holding the patch towards them so as to tighten it, they commence on the middle of one of the sides,

and how to do the corner. Work one of the corners on the P.P.A., and get a pupil to do the other. While the pupils are seaming on the patch refresh their memories as to the important points to be observed and the faults generally met with in seaming, and draw a diagram on B.B. showing the

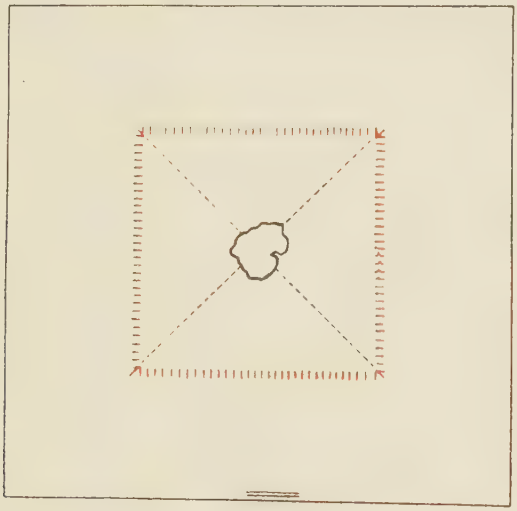


Fig. 2.

wrong side of the patch and garment at this stage. (Fig. 2.) Tell them that if they prefer it they may prepare both the right and wrong sides of the patch before they do the sewing.

VII. *b.* Examine the pupils' work, and point out the faults noticed.

(1) Selvedge-way of both pieces not running same way.

(2) Pattern not properly matched.

(3) Seaming puckered and corners untidy.

VIII. *Preparation of Wrong Side.*—Get the pupils to turn their exercise to the wrong side, while you turn your paper patch to the same side also, after they have flattened down the seaming, &c. Call the attention of the pupils to one of the specimens, and get them to tell you that the thin places round the hole are cut out to within $\frac{3}{8}$ inch of the seaming in the form of a square.

IX. Show on paper patch how the children must cut up along the diagonals from the hole towards the corner of the seaming till they are about $\frac{1}{2}$ inch

from each corner, which will be as far as the turnings of the patch. Get a pupil to come out and cut up the second diagonal. Ask the pupils to lay their small card tape-lines from one corner to the opposite one diagonally, and make 2 small holes ½ inch from each, and then do the other two. Get the children to cut up to these 4 small holes, and then cut out, as in the calico patch, in the form of a square. (Fig. 3.)

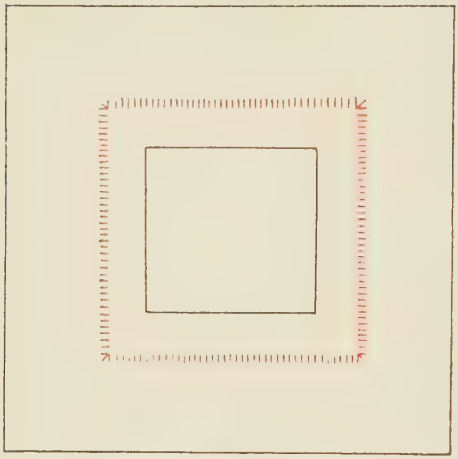


Fig. 3.

Call the pupils' attention to the *double raw edges* on each side.

X. *Sewing of Wrong Side.*—Explain that the raw edges on the wrong side have to be overcast to prevent them from fraying out. Show specimens of plain overcasting, such as is used for the bodice of a dress, and embroidery stitch. Tell the children that as the latter looks prettier, they are to learn it, but plain overcasting may be used.

XI. *Embroidery, Button-hole, or Blanket Stitch.*—Show the children on

Fig. 4.

D.F. how to do the simple stitch. (Fig. 4.) Give them its other name—Blanket Stitch—and tell them why it is so called.

Then on P.P.A. or paper patch show pupils (1) that they commence at the left-hand corner, and work towards the right. (Figs. 5 and 6.)

Holding side No. 1 with the raw edges towards them, along the forefinger of the left hand, the teacher should show the children how to run the cotton down between the folds, and bring the needle out at the raw edge *close to the*

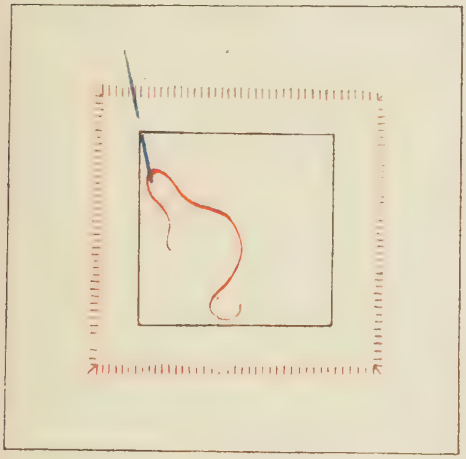


Fig. 5.

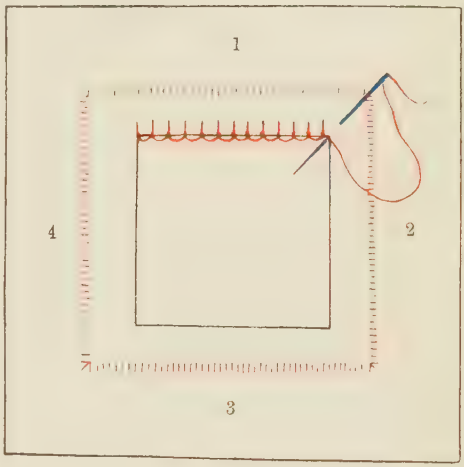


Fig. 6.

left top corner. (*a*) Keeping the thread beneath the thumb, they then insert the needle through the double fold $\frac{1}{6}$ inch up from the raw edge and $\frac{1}{6}$ inch from the corner, and (*b*) bring it out in a straight line downwards.

The pupils will then proceed till they come to the corner, and the teacher will impress on them the necessity and reason for not drawing the thread too tightly—lest the edges get rolled up—and for not showing stitches on *right* side.

XII. *Corner of Inside Square.*—When the children come near the corner, the teacher must make them lay down their work, and do the corner on the P.P.A. for them. She will show them that the 1st stitch of the corner must come out on a line with the raw edge of the side, (2) the 2nd will be on a diagonal with the corner, and the 3rd will be in a line with the raw edge of side (1). (Fig. 6.)

Get one or two pupils to do the 2nd and 3rd corners on the P.P.A., and then allow them to proceed.

XIII. *Join in Thread.*—Show on the P.P.A. how to end off the thread by running a few stitches up at right angles to the raw edge, and how to com-

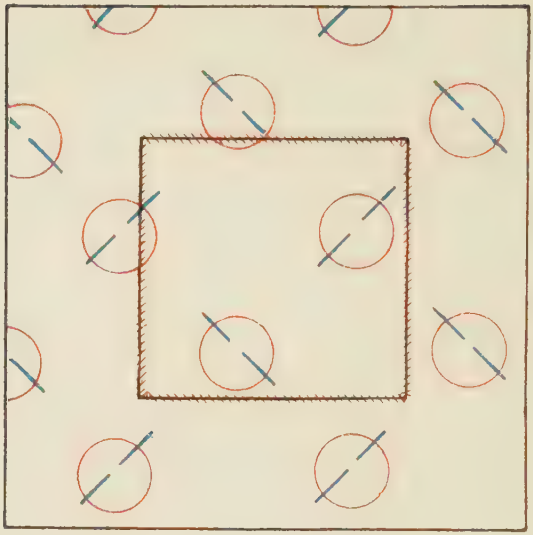


Fig. 7.—Right Side Finished.

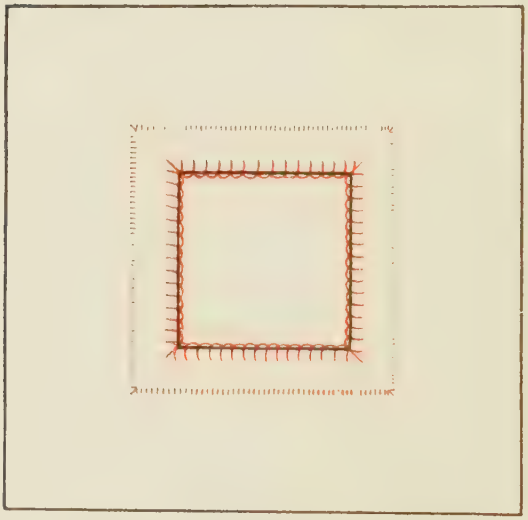


Fig. 8.—Wrong Side Finished.

mence the new one by running down a few stitches in the opposite direction, and bringing the needle out at the twist of the last stitch made.

XIV. Whilst the pupils are finishing the last side, the teacher should examine their work, and then point out any faults she may have observed.

(1) Embroidery stitches (*a*) too deep, (*b*) too short, (*c*) too tightly drawn up to the edge, and (*d*) too closely worked.

(2) Joins insecure or wrongly made.

XV. Show a patch finished as in Fig. 9, and tell the pupils that they might do the back of their patches like it.

Explain to them that a patch finished thus lies more flatly when ironed than one finished by the 1st method, but that it takes more time to do, and is weaker at the corners.

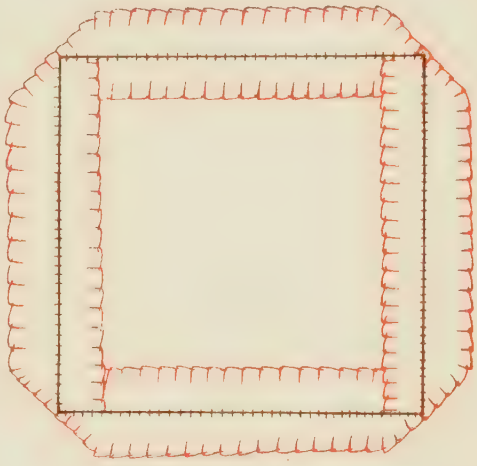


Fig. 9.

N.B.—Serge, tweeds, &c., may be mended in the same way, provided the mending silk or thread match the material, and the patch be ironed under a damp cloth.

RUN-AND-FELL SEAM.

Apparatus.—Running and felling sheet of P.P.A., 2 pieces of paper 15″ × 18″ to show the placing of work, muslin pinafore, B.B.

Pupils' Materials.—2 pieces of fine calico each 5″ × 2½″, suitable needles and thread.

Introduction.—Ask the class to name the different ways in which they have been taught to join two pieces of calico together—Sew-and-fell, counter-hem, counter-hem stitched, both pieces hemmed and then seamed.

Show the class the pinafore, and allow them to see that its seams are not done in any of these ways. Tell them it is done with a run-and-fell seam, and that this seam is suitable only for light materials, as muslin, cambric, or for calico seams on which very little stress is laid.

How to Fold a Run-and-fell Seam.

I. Ask the children to take up one of their pieces of calico, and, having

found the right side and selvedge-way, and seen that the edges are pared to a thread, mark both with a pin, as in Fig. 1.

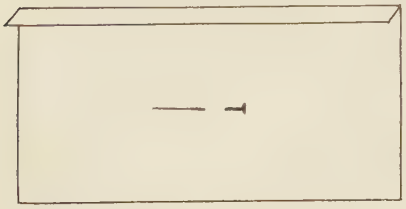


Fig. 1.

II. Show the children with paper how to turn down on the *right* side a narrow fold along the selvedge-way about $\frac{1}{8}$ inch broad. Get them to press it well down, and lay it on the desk with the fold *uppermost.*

III. Ask the children to take up the second piece of calico, and having found the right side and selvedge-way of it also, turn it over so as to have the *wrong* side *uppermost.*

IV. Show how the edge of this second piece must be slipped under the fold of the first piece, as in Fig. 2. Impress on the children that the two right sides will come together in the *inside,* and the two wrong sides be to the *outside.* Make the class take up work do this, and pin together at the ends.

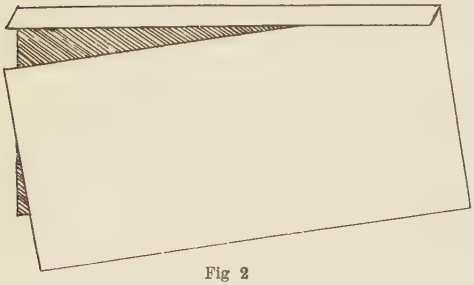


Fig 2

V. Get the children to notice that the raw edge is invisible now, and tell them to tack it a short distance above the edge, as in Fig. 3.

VI. *Sewing of Seams.*—Question class as to their knowledge of the running stitch, which they used for tucks in Class V.

Fig. 3

VII. Show on P.P.A., as in Fig. 4, how to commence and run the seam just below the raw edge of the fold, taking two threads and missing two threads if on calico; if on muslin, four threads, or $\frac{1}{16}$ inch. Remind the children that, as in the running of the tucks, they must take up a little more upon the needle than they pass over. Tell them that it might be run on the other side, only it is more difficult, as there is no fold to guide them. Impress on

the pupils the necessity of doing the running very carefully, as there will be gaps left in the seam if it be carelessly done.

VIII. With P.P.A. show the children how, drawing the hand along the seam on the right side, they press down the fold neatly so as to have *no fulness on the single material.* Impress on the pupils the necessity for care in doing this.

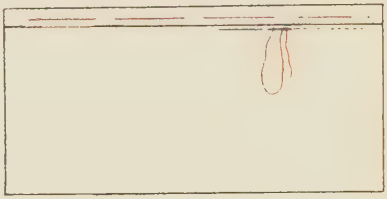


Fig. 4.

IX. Get them to hem it neatly, and then remove the tacking threads.

X. Examine the pupils' work, and call attention to the faults observed, which will be—

(1) Uneven folds.
(2) Irregularity of the stitches in running and felling.
(3) *Puckered* appearance on *right* side.

Fig. 5.—Wrong Side when Finished.

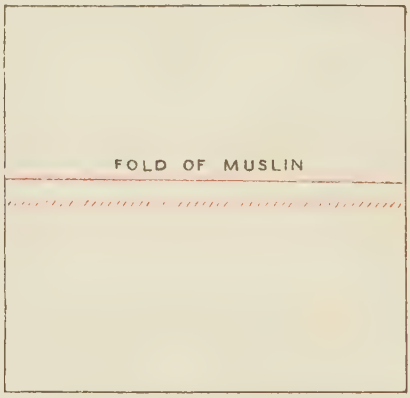


Fig. 6.—Right Side when Finished.

THE GUSSET.

Apparatus.—2 pieces of white paper 24″ × 8″, and square of lined or crimson paper 12 inches, to teach the folding; gusset sheet of P.P.A., large specimen of the exercise completed, scale 4 inches to 1 inch, shirt.

Children's Materials.—2 pieces of calico or tissue paper $5'' \times 2\frac{1}{2}''$, square of calico or paper 3 inches, scissors, suitable needles and thread. The folding should be taught on tissue paper first, and will prove quite sufficient for one or even two lessons.

Introduce the lesson by showing a garment with gussets, as a shirt. Call attention to the position of the gusset, and explain that a gusset is a triangular piece of cloth inserted to strengthen the foot of a seam or *any opening on which there is likely to be a strain*, and so prevent it from tearing up.

Tell the class that no new stitches are required for this exercise, but that the difficulty lies in the folding and fixing of the gusset.

I. *Preparation of Seam and Opening.*—Show the large specimen, and tell the children that their exercise is to be a facsimile of it.

II. Call attention to the seam, and elicit from the pupils that seams generally run selvedge-way.

Ask the children to take up the two oblong pieces of calico and join them by a sew-and-fell or run-and-fell seam about 1 inch in length.

Tell the children to stop the hemming of the fell about $\frac{1}{8}$ inch from the foot of the seam, so that the *hemming* of the gusset may form a continuation of the *felling* of the seam.

III. Show by cutting the paper specimen that the pupils must *cut across the fell on the wrong side*, to allow the edges of the opening to be perfectly flat. Get pupils to do this, and then, after cutting off the *under* turn of the fell, baste the sides of the opening with a narrow fold of $\frac{1}{8}$ inch, tapering to a point at the foot of the seam.

IV. *Preparation of Gusset.*—With square of paper show how to cut it across diagonally so as to form two isosceles triangles. Show that gussets are always in pairs—two wrist gussets, two neck gussets, two side gussets, &c.

V. Draw an isosceles triangle on B.B. (Fig. 1). Write the names, Apex, Sides, Base against it, and call the apex A and the base B C.

Show how to find the centre of the base by bringing the sides A B and A C together.

Ask the children to make a crease up the middle, and letter the crease at base D, as in Diagram 2.

VI. Get pupils to lay a fold $\frac{1}{8}$ inch deep along the sides and base of this triangle. Remind them of the rule, "Fold opposite sides", and tell them to lay sides first and base last, or *vice versâ* (Fig. 3).

Ask them to cut the corners left at each side (Fig. 4).

VII. With paper gusset show now that they must double the gusset so that the point A almost touches D.

Tell the children to bring down A till it touches the *top of the fold* on

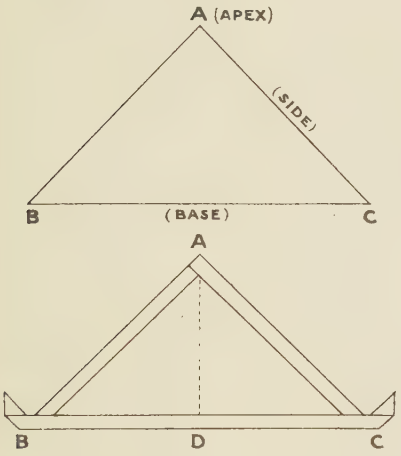


Fig. 3.

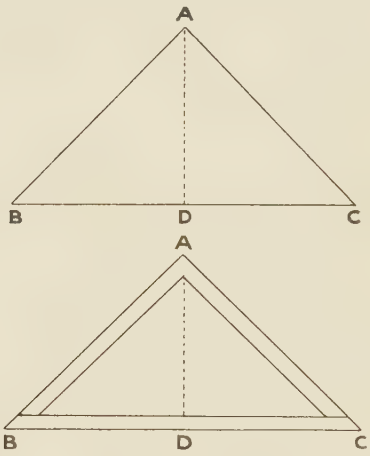


Fig. 4.

B C, and pinch it to make a crease as in Fig. 5. Draw diagram on B.B. to illustrate this as well as every preceding and succeeding step.

Ask them to call the new points E and F, and examine each pupil's work to see if she has folded it accurately.

VIII. Tell the class now to double the corners, so that B touches E, and

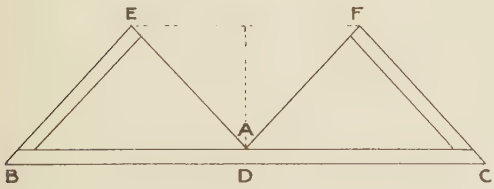


Fig. 5.

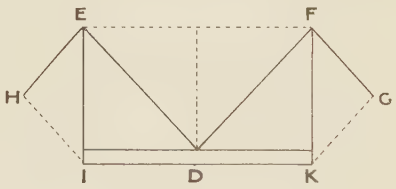


Fig. 6.

C touches F (Fig. 6), and pinch it so as to make a crease at each side. Do this on the B.B. and the paper triangle along with pupils. Call attention to the small triangles which have now been formed, and letter them. Show

pupils that they must now cut off these triangles G F K and H E I. *with the exception of a fold ½ inch in depth* from G to K and H to I, else the gusset will be clumsy.

IX. *Insertion of Gusset.*—With P.P.A. show the children (1) that, holding the right side of the garment towards them with the seam at the left hand

Fig. 7.

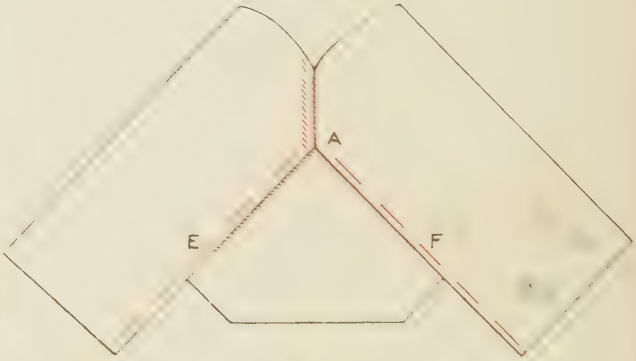


Fig. 8.

(Fig. 7), the apex of the gusset must be placed at the end of the seaming, and pinned to keep it in its place.

(2) That the left-hand edge of the opening must be pinned to one end of the crease F, while the right-hand side must be attached to the other end, E. (Fig. 8.)

If thought necessary, they may baste it.

Get children to seam from F round to E, and with P.P.A. show them that they must make three to five stitches at the apex of the gusset to fasten it securely.

X. Tell the children there is no necessity for breaking off the thread at the end of the seaming, as the *same thread can do the seaming* on the right side, the *hemming* done on wrong side, and the *stitching* across the base of the gusset.

Remind them that the seam must be flattened, and having done so to the P.P.A., turn the sheet round, and show them how to pin the perpendicular crease on gusset exactly to the middle of the seam, and the other points

G H, I K flatly down, so that each corner forms a right angle, as in Fig. 9.

Hem the P.P.A. along with the children, and, while doing so, show how to turn each corner neatly and take out the pins as they proceed. Impress on them that the *base* of the triangle requires a *little stretching* to make it lie flat.

XI. When the hemming is finished make the children turn with you to the right side, and with same thread stitch across the base of the gusset quite close to the edge. (Fig. 10.)

Explain the reasons for stitching it.

(1) To make the edge stronger.

(2) To give the gusset a neat finish.

XII. Examine pupils' work, and call attention to the faults observed.

(1) The gusset not geometrically shaped nor evenly inserted.

(2) The openings badly prepared, and corners not even.

(3) Puckered appearance of the work.

(4) Irregularity in hemming and seaming stitches.

N.B.—A second lesson might be given on the insertion of an isosceles triangle as a gusset for the sleeve of a baby's shirt, &c., and a third on a square gusset set into chemise and shirt sleeves to widen and strengthen them.

Show that this triangular gusset may be used *without* a seam to strengthen side-openings of drawers, &c.

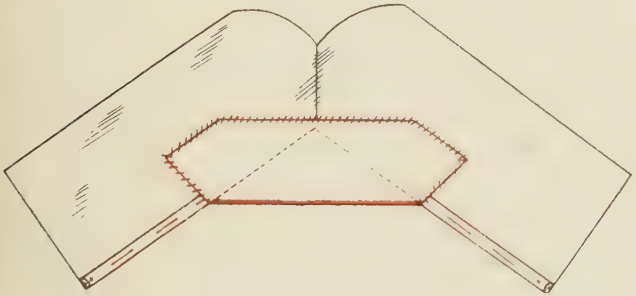


Fig. 9.—Wrong Side of Gusset Finished.

Fig. 10.—Right Side Finished.

WHIPPING AND SEWING-ON A FRILL.

Apparatus.—Diagram of whip-stitch; diagram showing frill being attached to band; frill sheet of P.P.A.; B.B., and set of children's materials; night-dress trimmed with frilling.

Pupils' Materials.—Calico band $3'' \times 1\frac{1}{2}''$; strip of Mull muslin $6\frac{1}{2}'' \times 1''$; needles Nos. 9 and 10; cotton Nos. 80 or 100, and 60.

Introduce by showing a frilled night-dress. Call attention to the beauty and softness of the frills, and tell pupils that there is no cheaper method of adorning underclothing, if we except the time spent on the making-up of the frills.

Materials for Frills.—Ask pupils to look at the material before them, and explain:—

1st. That muslin is a soft and thin *cotton* material, first made at Mosul, on the Tigris—hence the name.

2nd. That some of the finest muslins come from India, and the Hindoos call muslin Mul-mul, therefore the term Mull muslin. Tell the pupils that the prettiest frills are made of cambric—a fine *linen* cloth which gets its name from Cambray in France, where it was first manufactured.

How to Cut Frills.—Frills should be cut the *weft-way* of the material, the *selvedge forming the depth* of the frill. If not cut in this way, the roll will not be easily formed, neither will the frill sit nicely when attached to the garment, and the laundress will find it very difficult to crimp or goffer them.

Depth of Frills.—The depth varies from $\frac{1}{2}$ to $1\frac{1}{2}$ inch when finished, but as frills should stand upright, and will not do so if too wide, a $\frac{3}{4}$-inch frill is generally preferred. If deep ones are required for falling down, the frill might be widened by an edging of Torchon or Valenciennes lace.

Proportion of Frill to Band.—Ask pupils to measure their muslin and their band, when they will find the *muslin* to be *twice* the length of the *band.* Tell them that this is the usual proportion, but a little more may be allowed if extra fulness is required. If more than one piece of frilling be required it must be neatly joined *before the hem is fixed.*

I. *Preparation of Frill.*—Draw diagram of frill on B.B., and show that after the pupils have pared the fluffy edges true to a thread, they must lay

down a narrow fold along the two short edges and one long edge of their muslin. Tell pupils the hem should be as narrow as possible, but never more than $\frac{1}{8}$ inch. Some prefer to roll the short ends and then hem them.

II. Get the pupils to hem this round with their finest thread, and remind them that they must not forget the seaming of the corners. (Fig. 1*b*.)

III. Draw from pupils that in the Gathering Exercise they put in small crosses at the half and quarters, so as to apportion the fulness equally. Tell them to do the same in this exercise, and do it along with them on P.P.A.

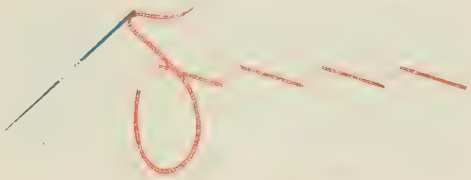


Fig. 1 *a*.

IV. *Commencement of Thread.*—With P.P.A. show the pupils that, holding the wrong side of their frill towards them (the hemming will show them this),

Fig. 1 *b*.

they fold down a narrow hem at the right-hand top corner for about $\frac{1}{4}$ inch, and commence by seaming the corner and making three hemming stitches with their No. 60 thread. (Fig. 1.)

V. *How to Hold Frill and Make Roll.*—When all have commenced show them how to hold and roll the frill either with P.P.A., or, better, with a piece of muslin.

1st. With thumb and forefinger of right hand the pupils catch hold of the corner where the three hemming stitches were done.

2nd. The pupils lay the remainder of the frill across the left forefinger, and let it fall into the palm of the left hand.

3rd. With third and fourth fingers of left hand they grasp the end in palm *pretty tightly.*

4th. The pupils then keep the left forefinger motionless, and make a neat little roll by gently drawing the left thumb upwards and downwards over the raw edge. Allow the pupils to roll about an inch, when they must stop till they have been shown how to make the whip-stitch. (Figs. 1*a* and 2.) Exa-

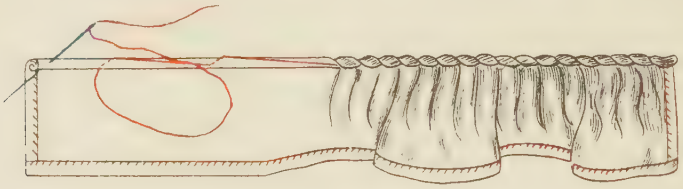


Fig. 2.

mine each pupil's work, and impress on the class the necessity for having clean hands to make frills, and when moving the thumb up and down, to draw it *towards the left.*

VI. *How to Make the Whip-stitch.*—Explain that, when drawn up, the *curls* or *ridges* make the work appear like a piece of whip-cord, and therefore the name. Show on P.P.A. how to make the stitch, and then dictate the following:—

(1) Insert the needle from the back of the roll or the right side of the frill, and bring it through *immediately under* the roll.

(2) When bringing it through, slant the needle from right to left.

(3) Leave about $\frac{1}{8}$ inch between each stitch, or from 8 to 12 threads of the material; but the eye must gauge the distance after the first three stitches are done.

(4) Only one stitch should be taken on the needle until the method of doing it is fully understood; but an excellent seamstress will take three stitches, and sometimes as many as her needle can hold.

After the pupils have whipped an inch show them on P.P.A. how to draw up the whipping thread, and tell them they must do so every inch or so, lest they have gone *through* the roll itself *instead of beneath it.* If they have done so, they will find that they cannot draw their thread, in which case they must just unpick to the stitch which went through and proceed anew. Impress on the pupils that they must not *draw the thread too tightly,* lest they twist the frill or break their thread.

VII. *Sewing on of Frill to Band.*—When the whole is whipped up ask

the pupils to draw up the thread to the length of the band, and fix it round a pin at the end.

VIII. With P.P.A. show pupils how to lay band on desk with the *right* side *uppermost*, and taking up the frill with the *wrong* side *uppermost*, lay it upon the band, so that the right side of the frill is towards the right side of the band, and both are inside. Pin the ends, half and quarters with small pins, and if necessary baste it.

Sewing on.—Tell the pupils they may hold *either* the band or the frill *towards them*, but that it is thought easier to hold the frill towards them, because the whipping-up thread will then be at the left hand, and so the fulness can be more easily regulated.

IX. With P.P.A. show the pupils how to fasten on their thread as if they

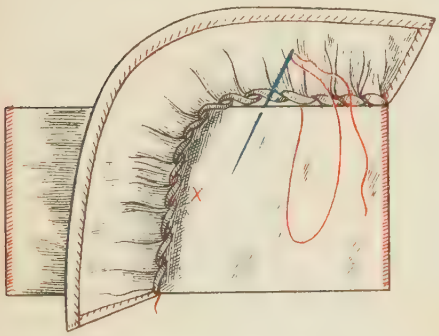


Fig. 3.—Band held towards Pupil.

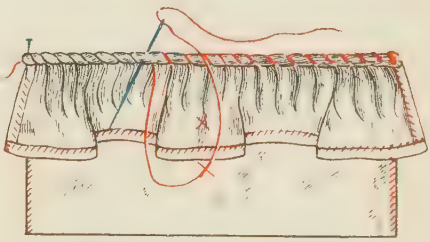


Fig. 4.—Frill held towards Pupil.

were to seam. Show the following diagrams (Figs. 3 and 4) of the setting-in stitch, and impress on the pupils (1) that the needle just skims the top of each *curl* or ridge, (2) that the needle is inserted in a slanting direction, and (3) that the thread falls into the *grooves* between each curl or ridge.

Do a few stitches on the P.P.A. to illustrate these three points. Get one or two pupils to come out and do a few stitches, then allow the class to proceed to the end, when they will finish off both whipping-up and setting-in thread by sewing back a few stitches, as in seaming.

X. While they are doing so, examine the pupils' work, and comment on the faults—

(1) Hem of frill too broad.

(2) Roll too thick and too loose.

(3) Frilling not evenly distributed.
(4) Setting-in stitches too deep.
(5) Fastenings insecure.

Note.—As soon as the pupils can do the stitch, let them practise it by

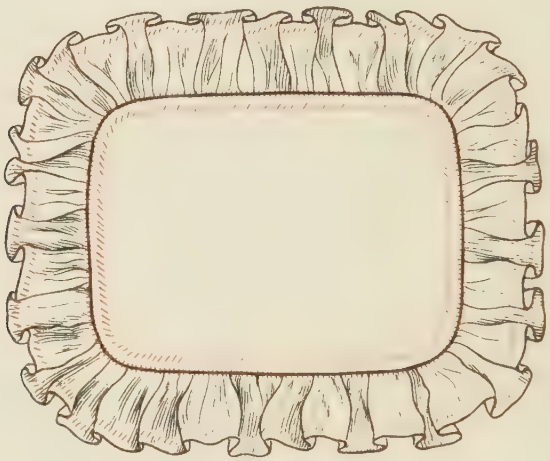


Fig. 5.

making tuckers for themselves with a piece of tape about 13 to 14 inches long and a piece of frilling from 28 to 32 inches, or let them whip up the embroidery or lace they use to trim their garments.

CORAL OR FEATHER STITCHING.

Apparatus.—Diagrams of coral and feather stitching; specimens of it worked on Java canvas with double Berlin wool; Demonstration Frame; Java canvas band; needle and scarlet cord.

Materials.—Piece of canvas 3 inches square; band 6″ × 2″; fine darners, and crochet thread.

Introduce by referring to the different ways in which we ornament underclothing—Stitching, frills, lace, &c. Tell the pupils they are now to be taught another ornamental stitch called Coral, Feather, or Tree Stitch.

I. Show the following *permanent* diagrams, or sketch them on B.B. before the class. (Fig. 1.)

Elicit from the pupils that it receives the name from its resemblance to the arrangement of the sprays of coral, or the barbs of a feather, or the twigs on a branch.

Show specimens of the stitch done on both double and single material, and

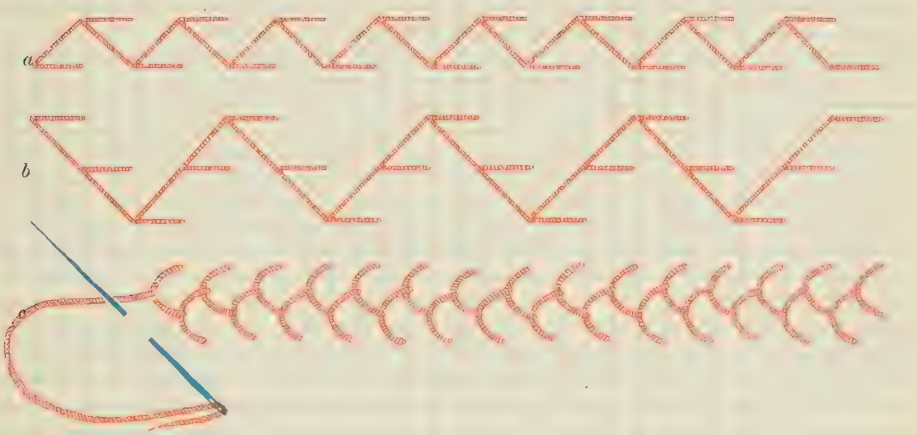


Fig. 1.

tell them they are to have their first lesson on canvas, as they can see the threads better.

II. Refer to Herring-boning, which they worked in *horizontal lines*, or across the canvas, and tell them they always work this new stitch downwards on *perpendicular lines*.

III. *Commencement of Thread.*—Get the pupils to hold their work over the first and second fingers as for hemming. With D.F. show them that they must bring through the needle from back to front, and leave about $\frac{1}{3}$ yard, which can be darned in at the back of the stitches afterwards.

To secure it more firmly they may (holding the thread beneath) insert the needle in the same place, and bring it out three threads downwards, in a *straight* line.

IV. *Stitch to Right.*—On D.F. show the pupils that they must—1st, curve the thread round towards the right, so as to form a half loop or circle, which loop must be *beneath the thumb*.

2nd. Insert the needle three threads towards the right in a straight line, and bring it out three threads downwards in a straight line, the needle to come out *above* the loop.

3rd. Pull the needle through, and when the thread is almost drawn in lift the thumb.

V. *Stitch to Left.*—Call the pupils' attention to the diagram, and get them to tell you that the next stitch is worked towards the left. Show them that they must now curve the thread round towards the left, and hold it down firmly with the thumb; insert the needle three threads towards the left, and bring it out three threads downwards in a straight line *over the loop*, or with the thread beneath the needle. Impress on the pupils that by so doing they commence every new stitch *on a line with the foot of the one last made.* Tell them that though they count threads on canvas, they must gauge the length of each stitch with the eye. When working it on calico $\frac{1}{8}$ or $\frac{1}{10}$ inch is the usual size.

Fig. 2.

VI. Get the pupils to go on doing one stitch to the right and one to the left *alternately* till they have got accustomed to it, when they may *vary it* (1) by doing some double feather-stitching by working three or four sprays to the right and the same to the left, (2) by slanting the needle slightly towards the centre, Fig. 4, *a*, *b*, *c*.

VII. On D.F. show how to end off by taking the needle through to the wrong side, and running the needle out and in on the stitches already made.

VIII. Ask the pupils to take up their calico bands and needles with crochet thread while you draw a diagram of it on B.B. (Fig. 2.)

IX. Draw the pupils' attention to the coloured crochet thread. Tell them that crochet, embroidery, or linen thread may be used for working on calico and linen; silk or crewel worsted for flannel, serge, &c. Point out to the pupils that crochet thread wears well, but sometimes turns yellow; embroidery is soft, yet wears well, while linen thread is beautifully glossy, therefore much used for fine muslin, &c., and keeps its colour, but must not be subjected to hard rubbing.

X. Tell the children that for the *first lesson* on the band they may mark three lines with the point of their needles $\frac{1}{8}$ inch, $\frac{1}{4}$ inch, and $\frac{3}{8}$ inch from the edge, but that afterwards they must simply gauge the distance with the eye, or *run in a basting thread* to keep the lines straight. With Java canvas band show them how to slip their needle between the folds and bring it out on the $\frac{1}{8}$ inch line at the top, or tell them to draw their thread through from back to front, leaving an end about $\frac{1}{2}$ inch in length, which they will afterwards sew down with ordinary sewing thread. As on their canvas, get the pupils to curve their thread towards the right, and holding their thumbs firmly on the thread, insert the needle in the same place, and bring it out over the loop $\frac{1}{8}$ inch downwards. Show them how to work a few stitches on the Java band, and to pass over $\frac{1}{8}$ inch to the $\frac{1}{4}$ inch line, and inserting needle on a line with the foot of the last stitch, bring it out as before $\frac{1}{8}$ inch downwards, and so on, working three sprays to the right and three to the left. Impress on pupils that the stitches should be *small*, and close or *compact*.

XI. Educe from the pupils the advantages of feather-stitching over stitching: (1st) it looks prettier; (2nd) it is more quickly done; (3rd) it saves the eyesight.

XII. Examine and point out the chief faults observed.

(1) Irregular size of stitches. (2) Thread drawn too tightly, and work therefore puckered. (3) Insecure joinings, knots, &c.

XIII. Show the pupils by a diagram (Fig. 3) on B.B. that if coral stitching be worked on the two edges of front folds, &c., the pattern for

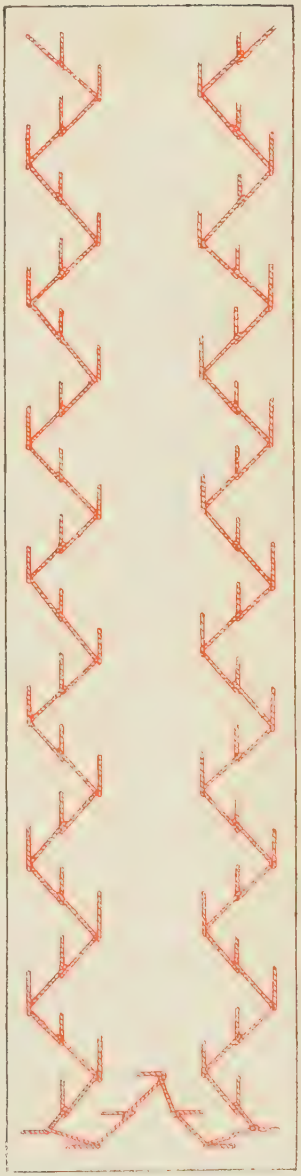


Fig. 3.—Front Plait of Night-dress.

each edge must be begun and worked in the same direction. Show also Fig. 4.

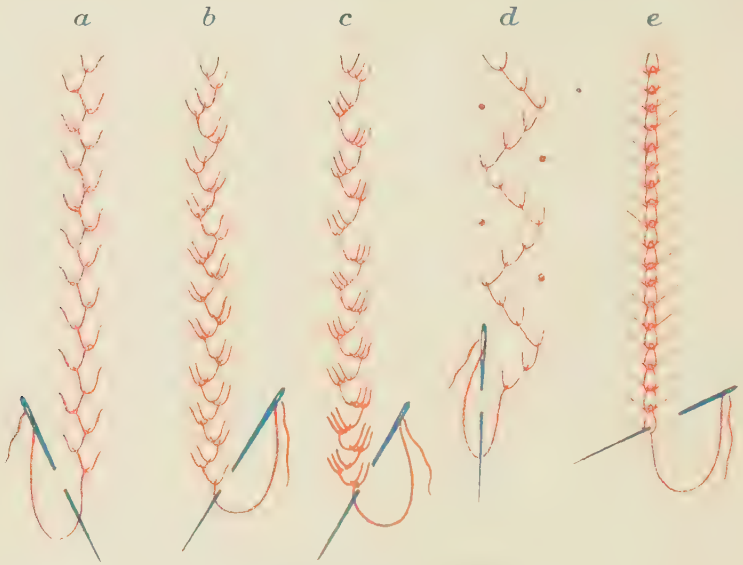


Fig. 4.—Various Patterns of Coral Stitch.

N.B.—For joins in Feather-stitching, see page 276.

HOW TO CUT OUT AND MAKE A CIRCULAR BAND FOR A PETTICOAT.

Apparatus.—Petticoat; B.B.; paper or calico bands at different stages; paper or flannel petticoat.

Pupils' Materials.—Paper for band; needles; No. 50 thread.

Introduction.—Show the petticoat. (Fig. 1.)

I. Get the pupils to cut out the four quarters of the band according to Fig. 2.

II. Ask the children to take two of the quarters, and placing the right

sides together, join the two sloping edges for the front by back-stitching them $\frac{1}{4}$ inch from the edge, as in Fig. 3 *a*, which sketch on B.B. Get them to do

Front of Petticoat.

Fig. 1.

Back of Petticoat.

the same to the other two quarters for the lining, and then open out and flatten down the edges, as in Fig. 3 *b*.

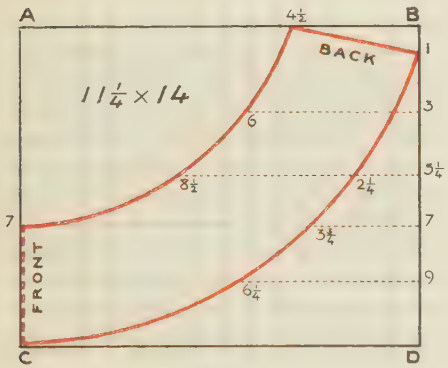


Fig. 2.

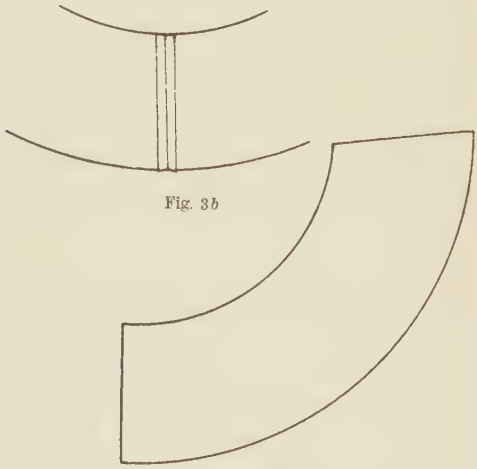


Fig. 3 *b*.

Fig. 3 *a*.

III. Show the children by means of paper bands how to fix the outer and inner halves of the band together.

Get them to lay one half on the desk with the *right* side *uppermost*, and then place the other half above it with the *wrong* side *uppermost*.

Show them that the front seams must lie above each other. Sketch in the

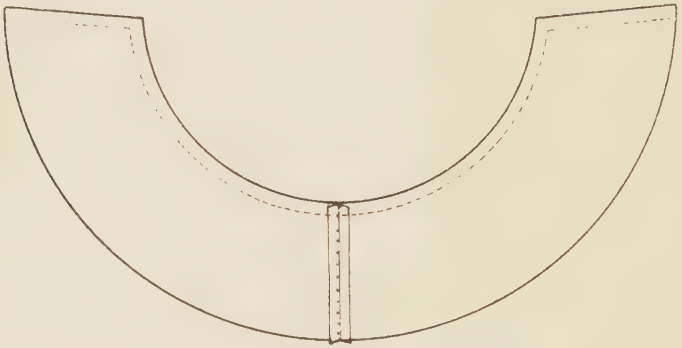


Fig. 4.

band with the basting stitches on the B.B., and ask the pupils to run and back-stitch the ends and upper edge. (Fig. 4.)

IV. Tell the children to snip off the sharp corners of the band, and turn the band right over to the other side, also to snip the inner and outer curves at intervals of 2 inches, so that the folds will set well.

V. Show the children how to turn the band so that no sign of the seam will be seen and the corners of the waist edges sit well.

VI. Stitch, chain-stitch, or feather-stitch the ends and waist edge on the right side $\frac{1}{4}$ inch from the edge, so as to make it stronger. Show specimens to class. To prevent twisting, ask them to baste another row about the middle of the band.

VII. Get the pupils to turn in the bottom edges of the band and its lining separately $\frac{1}{4}$ inch deep.

VIII. Show the children how to fix the centre of the petticoat to the centre of the band, and the edge of the placket-hole to the edge of the band at the back.

IX. Pleat the garment so that the most of the extra fulness shall fall to the back breadth, but not it all, and insert the pleats between the two folds of the band.

X. Tell the children to hem it on both sides, and after having done so, get the pupils to work two button-holes on the right-arm side, and sew two buttons exactly opposite on the left-arm side. Illustrate how the petticoat could also be fastened by strings at the waist, and a button and button-hole immediately above the placket-hole. If preferred, the band could be made in two halves, as it is only for *strength and economy* that it is here made out of four quarters.

XI. Show how a shaped or round band requires *more material*, and is more difficult to sew on, than a straight band, but that it sits better and is more comfortable to wear.

BINDING OF FLANNEL.

Teacher's Apparatus.—Garment showing binding; square of flannel; flannel binding (black or crimson, so that the class can see it better); blackboard and chalk.

Pupil's Materials.—Piece of flannel 3″ × 3″, and 15 inches of flannel binding ½″ wide, or tape; needle, No. 50 thread.

Introduction.—Show a garment with binding on it, and get from the class the use of the binding. Question as to the various ways of finishing the edges of flannel by button-holing, pinking, binding with galloon, &c.

Show the class that the binding is put on to show a little way over the edge on the right side, usually one-third of the width of the binding.

How to Fold the Flannel-Binding or Galloon.

I. Ask the class to take up the binding, and, holding the wrong side towards them, turn down a fold one-third of the width. (Fig. 1.)

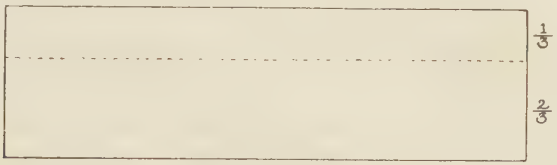


Fig. 1.

II. Bid the children find the right side and selvedge-way of the flannel, and after putting in a pin to mark these, lay it down on the desk with the *right* side uppermost.

How to Place the Binding.

III. Show the children how to place the right side of the binding, or the part of the binding folded down, on the right side of the flannel over the raw edge (beginning with the selvedge side first), the crease of the binding lying along the edge of the flannel. Ask class to tack the binding along the side,

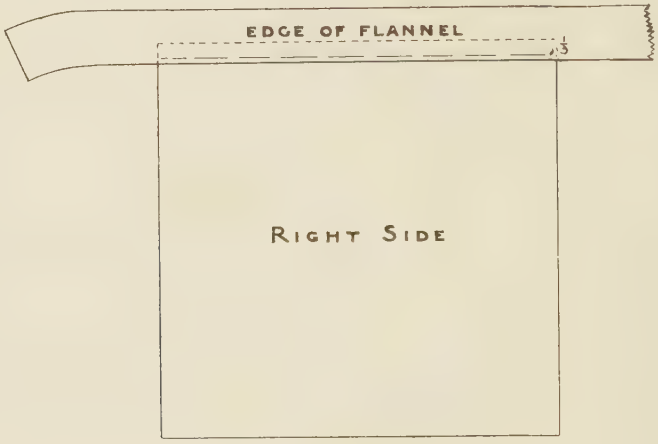


Fig. 2.

and impress on them the necessity for not rolling or turning over the edge of the flannel (Fig. 2). Also for leaving about an inch at the beginning so as to get the last corner finished properly.

IV. Explain that if the binding is not placed far enough from the raw edge of the garment it will break away when washed.

V. *Turning a Corner.*—Show the children how to make a pleat in the binding from left to right, and put in a small pin until the binding is tacked. Tell them to be careful to hold the *binding tightly* in the left hand, and the *flannel loosely*, while tacking, to prevent puckering. Explain to them that if binding requires to be joined, the join should form the *corner pleat.* Examine pupils' work and see if they have done it correctly.

VI. *Sewing on of the Binding.*—Ask the class to begin about the middle of the selvedge side, and hem or stitch as far as the corner. Show them how to slip the needle up to the top of the pleat and hem it down (Figs. 3 and 4), after which the needle and cotton will be in a position to hem the next side.

VII. Make the children turn to the wrong side and tack down the binding, which will be almost two-thirds of the width.

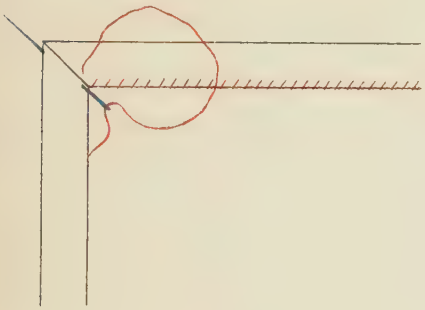


Fig. 3.

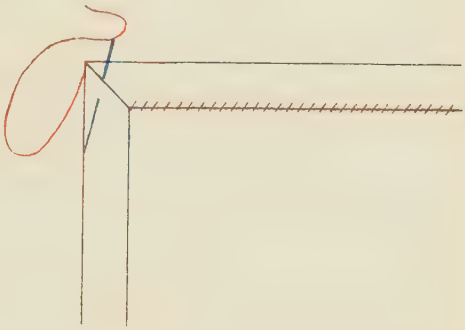


Fig. 4.

When tacking it down bid the children be careful not to draw the binding too tightly over to the wrong side, else the *edge* of the flannel *will be rolled* down, and the binding will not lie smooth and flat.

VIII. Ask the children to run the binding on the wrong side just above its edge, finishing the corners in the same way as on the right side, or they may hem it. Tell them the binding is now finished, but often it is ornamented on the right side by feather-stitching or chain-stitching just above the hemming.

Fig. 5.

Examine work, and call attention to the faults observed—

(1) Not placing the binding far enough from the raw edge of the garment. (2) Putting on the binding too loosely. (3) Leaving the diagonal crease at the corners unhemmed. (4) Binding or flannel drawn or puckered.

N.B.—The binding *may* be creased down the centre if preferred, and when turning a *rounded* corner always set it on full by means of *very small pleats* For *flat* binding, see page 275.

SCALLOPING.

Apparatus.—(*a*) Any garment ornamented with scalloping; small pair of sharp scissors; B.B., coloured chalk.

(*b*) Strip of flannel (double, to represent the hem of the petticoat) $12'' \times 3''$ deep; strip of clean calico; warm iron; transfer pattern of scallop on tissue paper ready for transferring to the flannel.

(*c*) Strip of paper, pencil; penny to make the scallops; strip of flannel with the outer edge of the scallops tacked, and with the paper placed ready for tacking the inner edges; needle and coarse coloured thread.

(*d*) Strip of flannel (double), say 6 inches long by 2 inches broad (when double), upon which are marked two very large scallops, one run, the other not; Merino wool, darner.

Materials.—Double strips of flannel $4'' \times 1\frac{1}{2}''$ ready stamped (scallops about the size that a shilling would make); 4-ply Merino wool; darner; small pair of scissors.

I. *Introduce* the lesson by showing some flannel garment (preferably a petticoat) ornamented with scalloping. Refer to scallop shell.

Call attention to the stamped flannel which the children have before them, and tell them that these pieces are meant to represent the hem of a petticoat.

II. *How the Pattern was Made on the Children's Pieces of Flannel.*

(*a*) Show the transfer pattern on tissue paper. Explain that this paper may be bought stamped with various sizes and patterns of scallops.

(*b*) Show how to smooth down the flannel by passing a warm iron over it, *after having laid a strip of clean cloth between the flannel and the iron.* Get the children to tell the reason for so doing. If the woolly fibres were not smoothed down the pattern would not be clearly seen.

(*c*) Show how to place the paper right side downwards, just at the edge of the flannel, and pass a moderately hot iron over the paper, which paper must be lifted from the flannel with the left hand as the iron is removed, or else it will adhere.

III. *Method of Forming the Scallops without Buying the Paper.*—Dictate the following, and show it on B.B.

(*a*) Lay a penny or a shilling a little distance from the edge *of a straight strip of paper*, and draw in pencil a straight row of half-circles. Then cut round the scallops.

(*b*) Lay *the scalloped paper* on the flannel a little distance from the edge, and then tack round the scallop with coarse thread. Do this in coloured thread, but explain that in doing a real garment the children would use thread of the same colour as the material.

(*c*) After tacking round the *outer edge* of the scallop, move the paper in

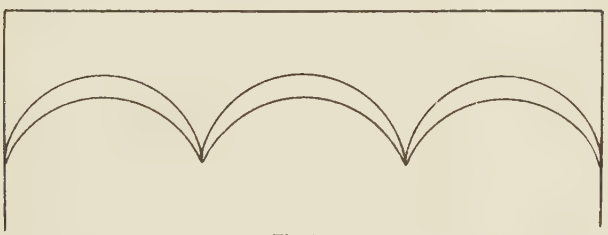


Fig. 1.

a little farther from the edge (about $\frac{1}{4}$ inch), and *run the inner circle*, thus making the middle of the scallop deeper than the sides. (Fig. 1.)

IV. *Working of Scallop.*

(*a*) *Padding.*—Draw attention to the garment, showing that the stitches appear raised. Explain that this appearance is obtained by first filling the scallop with thickly-worked running or *chain-stitch* stitches in wool. Show on the large flannel or canvas specimen how to do this running or padding; explaining that we must make as much wool as possible show on the right side. The *middle part* must be *thickly run*; towards the points only a few padding stitches are required, else the points would not set well. Draw diagram (Fig. 2). Tell the class that wool is used because it is thick, and fills up the space better than any other material; it also takes less time to do.

(*b*) *Method of Sewing or Covering the Padding.*—Give the following directions, and at the same time work a scallop before the children on the coarse canvas specimen:—

(1) Holding the edge of the garment *towards* you, work from left to right.

(2) Begin the thread, which may be linen, wool, or silk, by slipping the needle in between the folds, a little distance from the point where the sewing is to begin, and bringing it out just at the *outer edge* of the scallop. For the

covering of the scallop, wool, silk, or linen thread may be used. Show method. (Fig. 3.) Lustrine, mercinette may also be used.

(3) Hold the thread under the left thumb, making a loop from left to right, as in working the back of the print patch. (Fig. 4.) Get name of stitch—Blanket or Embroidery.

Fig. 2.

(4) Put the needle in *just above the inner line* of the scallop, and bring it out just below the outer line, to the *right* of the last stitch made and *above* the thread. Then take the thumb off the thread, and draw the needle out towards you, not too tightly, or it will pucker the work. Explain that we must hide the whole outline.

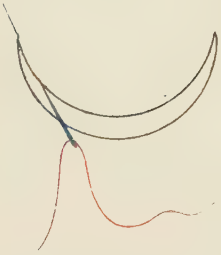


Fig. 3.

(5) Go on in the same way, making the stitches touch each other so as to hide the padding. Call attention to the twist at the edge. Draw attention to the fact that the *stitches vary in size* to suit the shape of the scallop. Tell the children to be very careful in sewing at the sharp points of the scallop.

(6) To join a new thread, slip the needle containing the old thread in between the folds, and cut off the thread. Then begin the new thread as at first, bringing the needle out exactly at the place where the old thread ended.

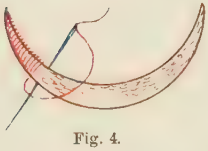


Fig. 4.

V. *Cutting the Edges.*—Show the children how, holding the garment in the left hand with the right side *upwards*, they, with a small pair of sharp scissors, cut away the flannel beneath the scallops close to the edge. Warn them to be cautious lest they cut the blanket-stitch threads.

VI. *Use of Stitch.*—Examine their work, and tell them scalloping is used to ornament the edge of any flannel or calico garment, as petticoats, shawls, bodices, &c.

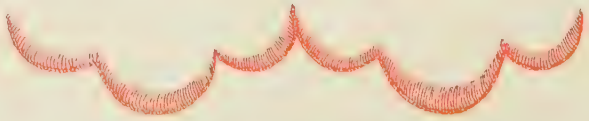


Fig. 5.—Compound Scallop Finished and Edge cut off.

HOW TO PREPARE THE FRONT OPENING OF A NIGHT-DRESS.

Apparatus.—Specimen night-dress and chemise; three paper specimens showing the exercise in various stages of progress.

Pupils' Materials.—Three pieces of paper—1st, to represent top of night-dress ($12'' \times 20''$); 2nd, a long strip for false hem ($16\frac{1}{4}'' \times \frac{7}{8}''$); 3rd, a long strip for front pleat ($16\frac{1}{4}'' \times 2''$); scissors, tape-measure, needle, No. 50 or 60 thread, pins.

Introduction.—Contrast the neckband of a night-dress with that of a chemise. Explain the use of the opening, and of the false hem and front pleat.

I. *How to Cut the Front Opening.*—Draw an oblong on B.B. to represent the paper which class have got, and letter it A B C D. This paper should be doubled, and A should be at the double top corner. Show the opening on the finished night-dress.

II. Require the class to measure 3 inches to the right from A and 3 inches down the double from A, and curve out the part as for the neck. (Fig. 1.)

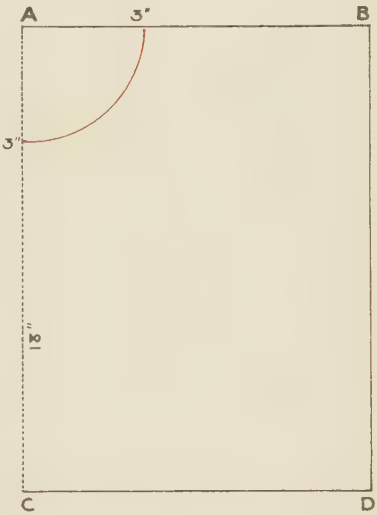


Fig. 1.

III. From the 3 inches on the double, 16 inches must now be cut down in a straight line for the opening. Tell the class that if the left-arm side of the night-dress were to be finished by a hem, the opening would not be made exactly in the centre, but as much to the right of it as the width of the hem folded down, else the two sides would not be equal.

IV. Question the class as to how night-dresses are fastened, and show the need for having double cloth at either side.

V. Give the rule: "For ladies' garments, buttons on the left side, button-holes on the right side; for gentlemen's garments, the opposite".

VI. *How to Finish the Left-arm Side.*—Explain that the left side is going to be done first, and make class cut a piece of paper $16\frac{1}{4} \times \frac{7}{8}$ inches. Show why this length is required.

VII. Require class to hold the wrong side of this strip towards them, and turn down a fold $\frac{1}{4}$ inch on the wrong side of one of the short ends.

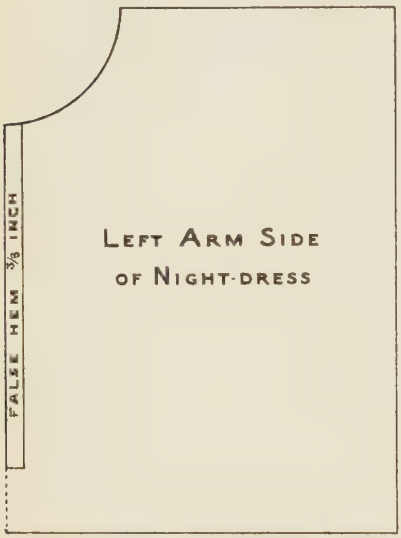


Fig. 2.

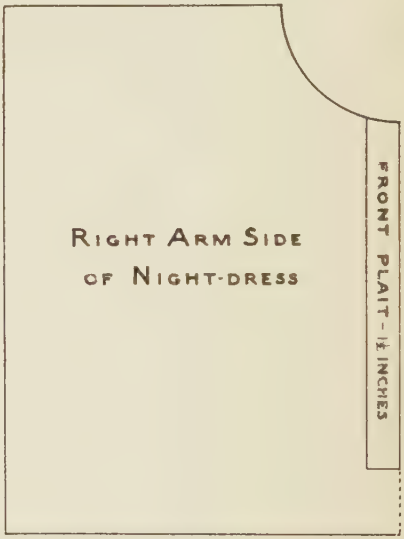


Fig. 3.

VIII. Allow the class to baste this strip to the left side of the opening $\frac{1}{8}$ inch from the edge on the *right* side. Show that back-stitching is the stitch used for this seam, and why.

IX. Get the class now to turn this strip all into the inside until the seam is not seen. As the raw edge is now seen, another fold $\frac{1}{8}$ inch must be turned in, and the whole piece hemmed round. Elicit why called "False hem". (Fig. 2.)

X. The left side is now finished, and the children next proceed to the right side, and a wider fold is here put on for the button-holes.

XI. *How to Finish the Right-arm Side.*—Require class to cut a strip $16\frac{1}{4} \times 2$ inches, and holding the *wrong* side towards them, turn down a fold $\frac{1}{4}$ inch along one of the narrow ends.

XII. Show with paper pattern how to place this piece in the inside, to back-stitch it down, and turn it over on to the front, until the seam is not

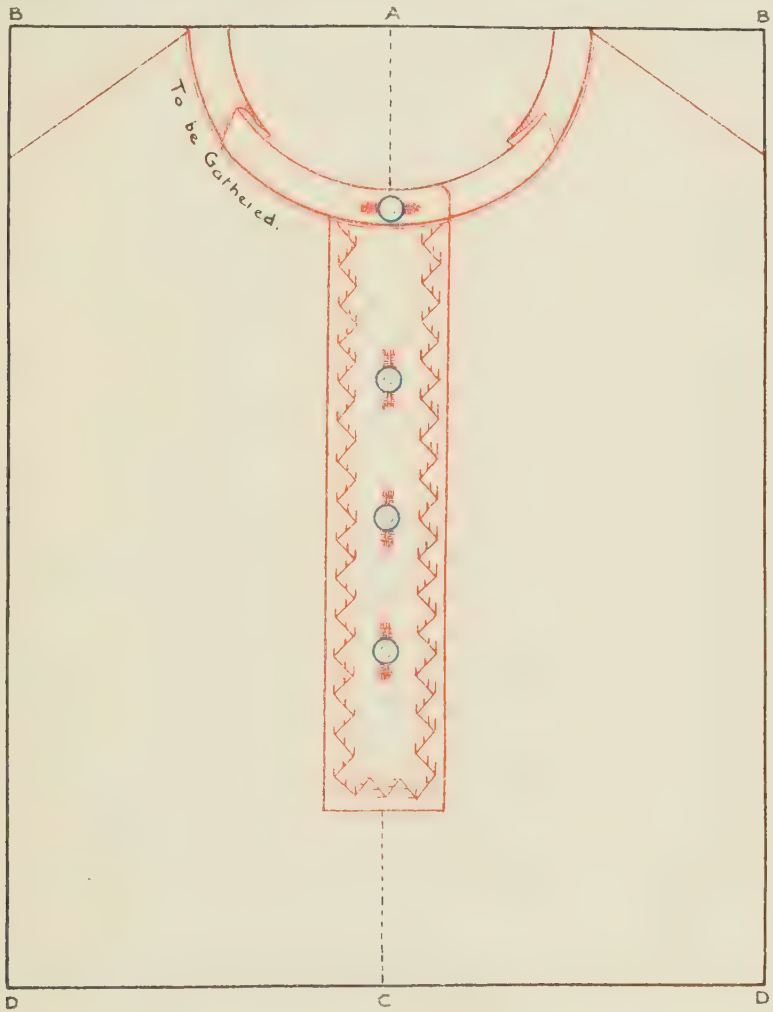


Fig. 4.

seen. Having turned it over, show how to fold down $\frac{3}{8}$ inch, and then lay flat. (Fig. 3.)

XIII. Elicit from class how this pleat is finished.

XIV. *How to Finish the Opening at the Foot.*—Show now, that although the sides are both double, still the night-dress would not fasten nicely, and then show on paper how the foot part is finished by cutting across the foot of the false hem, folding the front pleat over it, stitching it firmly down, and then inserting a small tape in the inside.

XV. Question as to how many buttons and button-holes are generally put on a night-dress. Show how these are distributed.

XVI. Finish by impressing on class how important it is that the button-holes be well made, and why no girl ought to rest until she has entirely mastered the art of button-holing.

CROSS-CUT DARN.

Apparatus.—Chequered B.B. and coloured chalks; cross-cut sheet of P.P.A.

Pupils' Materials.—3 inch squares of paper and Saxony cloth or coarse linen; blue and red lead pencil; scarlet and blue flax or ordinary thread; suitable needles.

Note.—The drawing or folding should first be taken on paper, either as given below, or in the form of creases. Simple folding or creasing of the rhomboids does away with the pencilling, which is objected to by some teachers.

I. *Introduce* the lesson by referring to a girl cutting bread on the table-cloth instead of on a plate, and finding she has cut the tablecloth as well as the bread. Tell the pupils that such a cut is called—(*a*) a Cross Cut, because it crosses both warp and weft threads; (*b*) a Diagonal Cut, because such a cut sometimes forms the diagonal of a square; or (*c*) a Breakfast Cut.

II. Show that such a cut *may lie at any angle*, and that the pupils must be able to darn them at whatever angle they occur, but that for the first lessons they will make the cut at an angle of 45°.

III. Draw the following diagram on B.B., and call the pupils' attention to it. Show that the shape of the darn generally used for a cross cut consists of two parallelograms or rhomboids intersecting each other. (Fig. 1.) Explain

parallelogram, and get pupils to come out and draw them in with differently-coloured chalks. Tell them that the darn is thought to be stronger when darned in this way than when done in a square.

IV. *How to Draw the Figure.*—Show the pupils how to make the figure by doing it along with them on the chequered B.B.

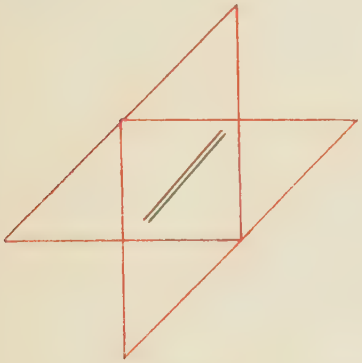


Fig. 1.

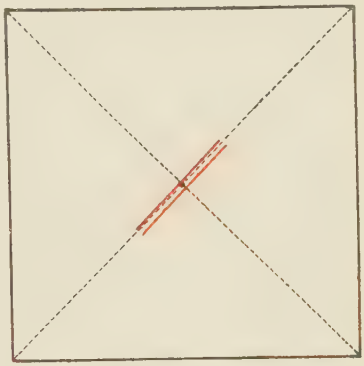


Fig. 2.

(1) Ask the pupils to take up their paper or Saxony cloth squares, and crease two diagonals on them as in Fig. 2.

(2) Tell the pupils to make a dot at the centre with their *red* pencils where the diagonals cut.

(3) Get the pupils to pencil a line $\frac{1}{2}$ inch on each side of this dot on the diagonal going from right to left to represent the cut.

(4) Show from Fig. 1 that this cut is enclosed in a square.

(5) Get the pupils to make two dots $\frac{1}{4}$ inch beyond the cut at each end, A and B, and other two exactly opposite, C and D. (Fig. 3.)

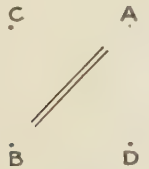


Fig. 3.

Fig. 4.

Fig. 5.

(6) Ask the pupils to connect these points with straight lines, and measure the sides of the square thus formed, which will be found to be 1 inch. (Fig. 4).

(7) Draw a triangle on B.B., and write the words—Apex, Side, Base, against it. (Fig. 5.)

(8) Draw Fig. 6 on chequered B. B. Show from Fig. 6 that the points C and D respectively form the apexes of the triangles to be formed.

(9) Get pupils to prolong (1) the line C A as far again toward the right as A is from C; (2) the line C B as far again *downwards* as C is from B, and

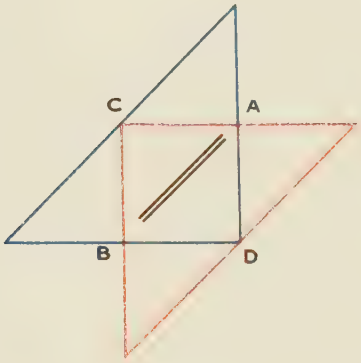


Fig. 6.

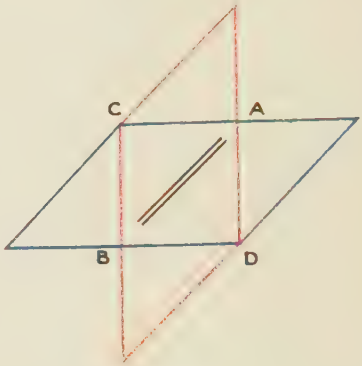


Fig. 7.

connect the two extreme points of these lines by a slanting one to form the base, as in Fig. 6, which should be drawn on the B.B.

(10) Ask the pupils to prolong D B to the left, and D A *upwards* in the same manner, and joining the points formed, construct the second triangle.

(11) With two colours of chalk draw in the rhomboids on the figure formed, as in Fig. 7, and point them out to the pupils. Explain "rhomboids", and get the pupils to pencil them out on their exercise.

(12) Tell the pupils that they may darn the shape either as triangles or rhomboids, but that the latter is the simpler and better way—

1. Because the cut is further away from the looped edges.
2. The looped edges lie further apart.
3. The number of stitches taken for the first row regulates the whole darn, *i.e.* remains always the same.

V. Examine pupils' work to see if they have drawn the figure correctly.

If preferred, the children might copy this in red ink or pencil on to cheese-cloth, and do the darning with an imaginary cut till they get accustomed to it, and then be transferred to coarse linen or Saxony cloth.

DARNING.

I. Ask pupils to take up their Saxony cloth squares, and with sharp-pointed scissors make the cut which they formerly pencilled.

II. Show the pupils how to *draw the edges or lips of this cut together* on the wrong side by *fish-bone stitch*, as in Fig. 8. Impress on them that when they are accustomed to the cut this will be unnecessary, and that as it is to prevent the material fraying out, it must be done with very fine thread. Fine drawing may be used by itself for mending cuts in serge, &c.

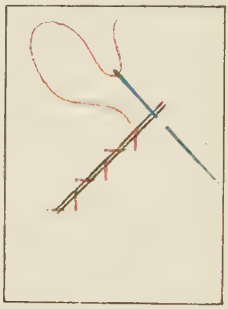


Fig 8.

III. *Darning of the First Rhomboid Running Selvedge-way.*—Remind the pupils of the way in which they darned flannel in Class III., and tell them this darn is to be done in exactly the same way, the number of threads to be passed over and under varying with the material.

IV. With P.P.A. show the pupils (1) that they must commence one of the rhomboids on the *left* side at the *foot corner*, and taking up two threads, and passing over two, darn to the top of the rhomboid; (2) for second row, pass over two threads towards the right, and going up two, take up those passed over in last row, and *vice versa*; (3) have the same number of stitches in each row; (4) keep the thumb on the raw edges when drawing through the thread to prevent fraying; (5) leave loops about $\frac{1}{8}$ inch long; (6) darn on wrong side; (7) keep the edges of the cut to wrong side.

V. *Darning of the Second Rhomboid.*—When the rhomboid running the *selvedge-way* is finished, show the pupils how to turn round their work and do the rhomboid lying along the warp threads. Show them on P.P.A. that they must commence this second rhomboid where they finished the first, and so that the *last stitch of the first rhomboid* and the *first stitch of the second* one shall form a *triangle*. (Fig. 9.)

VI. Impress on pupils (1) that when they darn this second rhomboid they must take up the material along with the darning threads; (2) that in crossing the cut, the strand passed over in one row must be taken up in the next, and so on, just as they did when crossing the hole in Class V. Darn. (Fig. 10.)

VII. When finished, ask the pupils to remove the fish-bone stitches.

VIII. Examine work, and point out the faults observed—

(1) Incorrect figure drawn, the cut not being parallel to the bases of the triangles or the short ends of oblong.

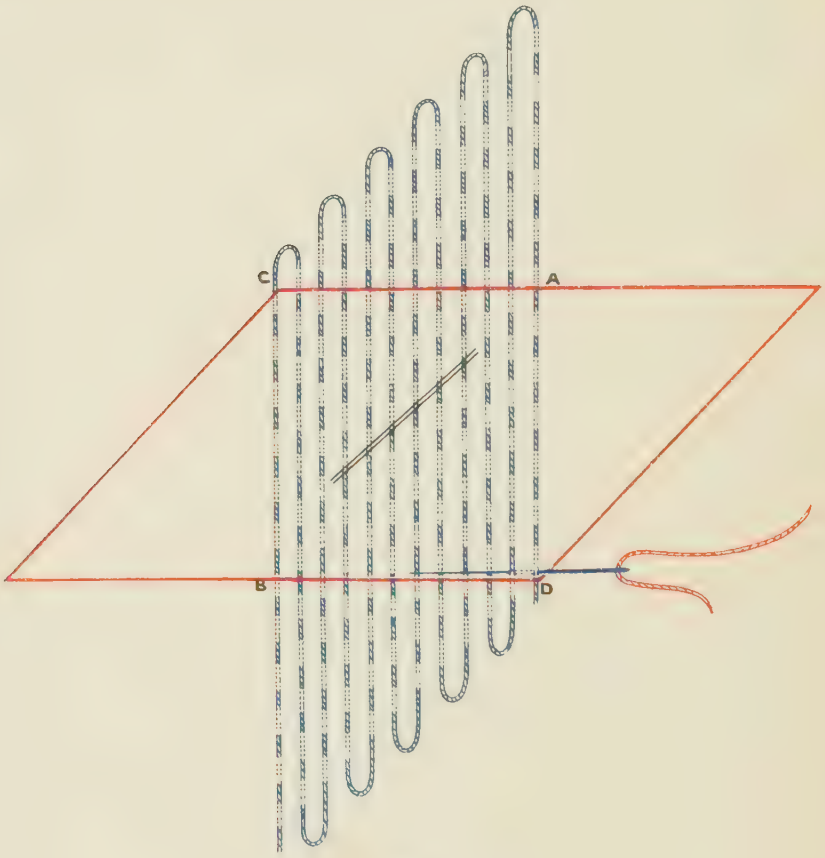


Fig. 9.

(2) Loops too short or too long.

(3) Edges of cut too much frayed out.

(4) Second rhomboid commenced wrong, and the new warp threads only taken up, instead of material and thread, when crossing this rhomboid.

Note.—Lessons in darning cross-cuts are valuable, but wise teachers will

take care lest their pupils gain perfection in it at the expense of their eyesight by too much practice on fine materials. For further remarks see page 281.

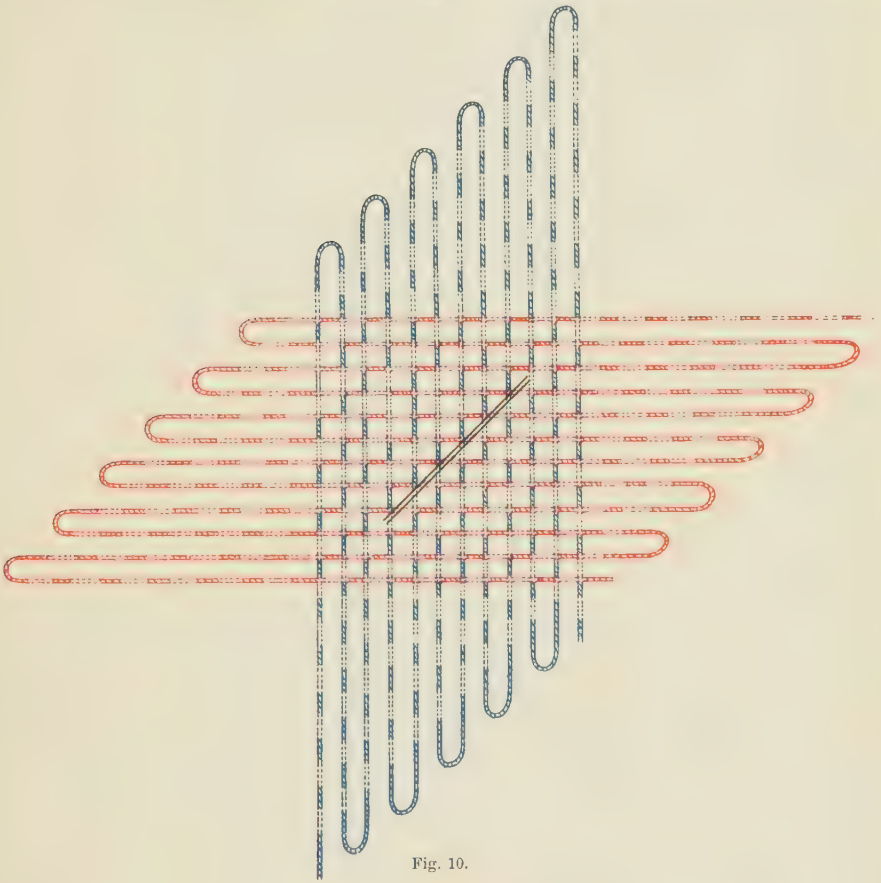


Fig. 10.

THE HEDGE TEAR.

Apparatus.—P.P.A., Black-board, &c., same as for Cross-cut Darn.

Pupils' Materials.—Piece of Flannel, Saxony cloth or canvas 4 inches square; card-board rulers; pencil or crayon; needles, and No. 30 coloured thread.

Introduce the lesson by referring to a girl gathering wild roses or brambles, and tearing her dress. Draw diagram on B.B. to show the shape which such a tear generally assumes, and tell pupils that as such a tear is generally made in a hedge it is called a Hedge Tear. Show that such tears are often made by nails on desks or projecting splinters of wood, and give the other names applied to these cuts, namely, Three-cornered Tears and Catch Tears. (Fig. 1*a*.)

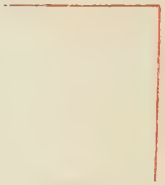


Fig. 1*a*.

I. *How to Enclose the Hole in two Oblongs.*—Show the girls how to double their cloth so as to crease it in the centre both perpendicularly and horizontally, as in Fig. 1*b*.

II. Make the pupils take their crayons, which should be the colour of

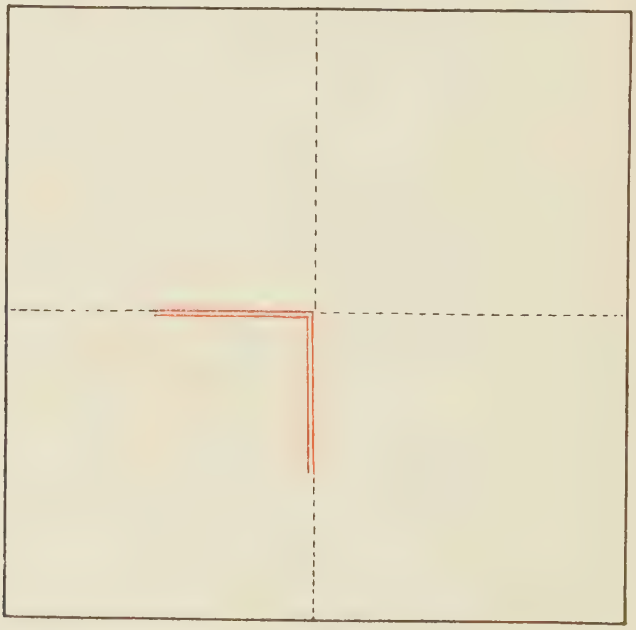


Fig. 1*b*.

their thread, and pencil the cut lightly, so that the apex of the triangle formed may be about the centre of their cloth, the tear to be 1 inch long each way. (Fig. 1*b*.)

III. Having examined the pupils' work to see if they have all done this

correctly, show them, by diagram on B.B. or by a finished specimen, how to enclose the tear in two incomplete oblongs, as in Fig. 2.

Call the pupils' attention to the fact (1) that the length of each oblong is twice the length of the cut, (2) its depth is the exact length of the cut, and (3) that half the depth is above and half below the cut.

IV. *Fish-bone Stitch.*—With P.P.A. show the pupils how to draw the edges

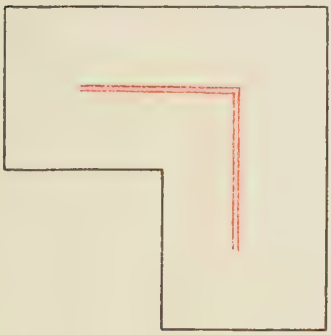


Fig. 2.

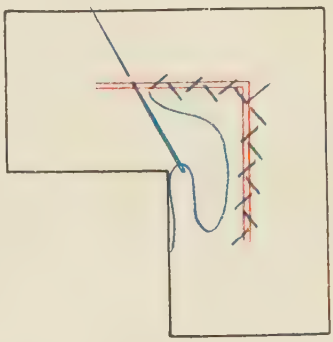


Fig. 3.

lightly together on the wrong side (the side on which they darn, unless the darn be on a lined material), with a fine thread, as they did in the Cross-cut Darn. Get them to tell the name of the stitch used for so doing—Fish-bone Stitch. (Fig. 3.)

Tell the pupils that sometimes Fish-bone Stitch is used alone for darning a rent if it be on thick material, such as serge, tweeds, &c. If used so, a damp cloth must be placed above it, and then it must be ironed.

V. *Suitable Thread for Darning Hedge Tears.*—Make a few remarks on the thread the pupils are to darn with. Impress on them the necessity for its being the same as the material they are darning. If a Holland dress, then linen thread or embroidery thread may be used; if of woollen material, the ravellings of the stuff would be best, but if these cannot be obtained, then Angola mending yarn or fine silk twist of the same colour would be used.

VI. *How to Darn the First Oblong.*—With the Patent Paragon Apparatus show that we begin to darn at the left-hand foot corner of the first oblong, as in Fig. 4, which is the selvedge-way of the material.

VII. Show that the pupils must lift two threads and pass over two, just as in Class III. Darning, until they reach the top of the oblong.

VIII. Remind the pupils that the work must be held over the first and second fingers, and kept in place with the thumb and third finger, whether they have basted it on cardboard or not.

IX. With P.P.A. show that in the second row we pass over two threads to the right going downwards, and take up the threads passed over in the preceding row, leaving loops about $\frac{1}{8}$ inch long. Get pupils to tell the reason for leaving these.

X. *How to Darn the Second Oblong.*—When the first oblong is finished, show with P.P.A. how to turn the work round, and darn the second oblong along the weft-way of the cloth. Or, if preferred, the darning of the first oblong may be stopped *when half-way across the cut*, and when the second oblong is finished the darning of it may then be resumed.

XI. Show that the stitches of the second oblong make an angle with the

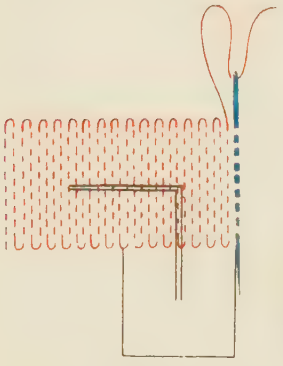


Fig. 4.

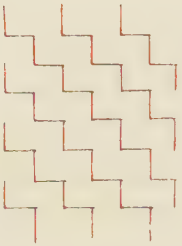


Fig. 5.

Fig. 6.

Fig. 7.

first stitches, and form a series of steps. At the same time tell the pupils that there are different ways of crossing. (Figs. 5, 6, and 7.)

XII. Impress on the pupils the necessity for being careful when they are passing over the tear to keep the thumb firmly on it so as not to fray out the edges, and still keeping the rule, "under two and over two". Explain that the double darning covers the weakest place, that is the jagged corner of the tear, or the part which was most strained when the rent was made.

XIII. When finished get the pupils to remove the fish-bone stitches if visible, and tell them that when darning a stuff material they should put a

damp cloth on the wrong side of the darn, and pass a hot iron over it to make it lie flat.

Note.—The pupils might do this exercise, 1st, on canvas without a tear

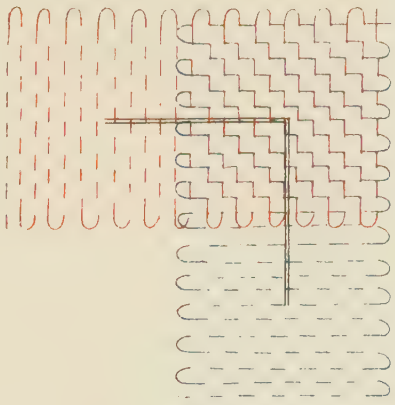


Fig. 8.

(a pencilled line taking its place); 2nd, on Oxford shirting; and 3rd, on merino, flannel, or cashmere, &c. See page 280.

LOOPS AND EYELET HOLES.

Apparatus.—Java canvas band; coloured chalks; blackboard; enlarged specimen of loops; large needle and coloured worsted.

Pupils' Materials.—Small band; needles; No. 50 thread, &c.

I. *Formation of the Strands.*—Call attention to the strands on the large specimen. Explain to the pupils that the stranding forms a foundation on which to work the overcasting, in order to make a firm edging for the hook or button. Show how to commence by slipping the needle between the folds, and bringing it out to the right side; then tell them to put the needle in about a quarter of an inch to the right of where they brought it out last, and bring it out again at the starting place, as in Fig. 1.

Show the pupils that they must repeat this till four or five strands are formed. Explain to the class that the finer the cotton or silk the greater the number of stranding threads required, and explain to them why the stranding threads must be of the same length.

II. *How to Cover and Protect the Edge.*—Demonstrate this before the pupils, and tell them (*a*) to begin from the left-hand side, (*b*) to hold the cotton down with the left thumb, (*c*) to put the needle under the strands, and

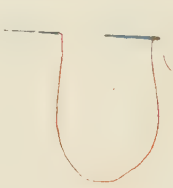


Fig. 1.

Fig. 2.

Fig. 3.

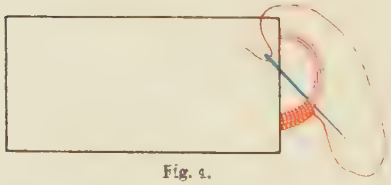


Fig. 4.

(*d*) to draw it out towards the chest, as in embroidery stitch, which they learned when doing the print patch. Tell them to loosen the thumb-hold, as the thread is drawn down. (Fig. 2.)

III. Explain to the class that some prefer to put the eye of the needle under the strand, as in Fig. 3. Draw these diagrams, and get the class to tell why Fig. 3 is the better way.

IV. Get the pupils to repeat making the stitches till the whole loop is formed, and the stranding threads completely covered.

V. *Finishing off of Threads.*—Show pupils how to pass the needle to the wrong side, make a back stitch, slip the needle between the folds, and cut off the thread. Explain to the class that the loop now formed is for a hook, but that if it were for a button, the strands would require to be slackened to allow the loop when finished to pass over the button, as in Fig. 4.

EYELET HOLES.

Eyelet holes are used for catching hooks, for passing laces through, as in the bodies of dresses, or for drawing runner tapes through, as in bags or the necks of pinafores. These holes should be pierced with a stiletto, and the

Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

edges protected either by being top-sewed thickly (Fig. 1), overcast with blanket-stitches, as in Figs. 2 and 4, or button-stitched, as in Fig. 3. For hooks and laces, eyelet holes are generally worked through *double* material, for draw-strings through *single* cloth.

CHAIN STITCH.

Apparatus.—Demonstration Frame; Java canvas band; suitable needles and cord for both; boy's flannel shirt showing the stitch.

Materials.—Canvas, darner, coloured embroidery thread, band and coloured crochet or flax thread.

Introduce by showing a garment with the stitch worked on it. Do a few stitches on the Demonstration Frame, and show that it receives the name Chain Stitch because each new loop springs up within the lower part of the preceding one, and thus represents the links of a chain. Show that it may be used instead of stitching on men's and boys' shirts, and for ornamenting children's frocks and pinafores, as well as for the hems and tucks of flannel garments.

How to Hold the Work.—Get the pupils to hold the work as for feather-stitching, and elicit from them that the stitch is to be worked from top to bottom.

I. *Making of Stitch.*—Show by the Demonstration Frame how to bring the needle through from the wrong to the right side, leaving about a finger-length of thread, which must afterwards be darned neatly in on the wrong side of the stitches.

II. Point out that the pupils must now hold the cotton loosely on the

Fig. 2.—Wrong Side and Fastening off of Chain Stitch.

Fig. 1.

Fig. 3.—"Wheat-ear" Variation of Chain Stitch.

right side, and then insert the needle into the same hole of the canvas, and bring the needle out four threads below, and *above* the cotton thread, which must lie like a loop under the needle.

III. Show the pupils (*a*) how to put the left thumb on the cotton coming from last stitch; (*b*) how to insert the needle a little to the right of the place

where the thread is coming out; and (*c*) bringing it out again four threads below, *above the cotton thread*, draw out, and let the thread lie loosely on the canvas, as in Fig. 1.

IV. Examine the girls' work, and when they can do it on canvas let them ornament a band with their coloured thread. Tell them that they must commence and finish off their threads as in feather-stitching or common stitching. (Fig. 2.)

SINGLE HEM STITCH.

Apparatus.—Articles hem-stitched; diagrams of hem-stitch (Fig. 1); Java canvas band; large darner, and scarlet knitting-cotton or embroidery thread.

Pupils' Materials.—Small Java canvas band, fine darning needle, and embroidery or flax thread.

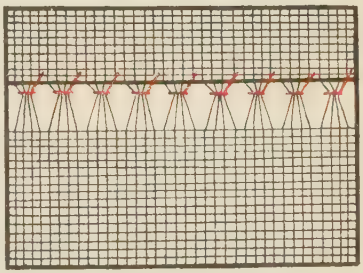


Fig. 1.

Introduce by showing a handkerchief or tray-cloth hem-stitched, and tell the pupils it is chiefly used in "drawn-thread embroidery".

I. *Folding of Hem.*—Tell the pupils, and show them on the Java canvas band how to turn down a hem *even to a thread.* Get pupils to baste it.

II. *Drawing out of Threads.*—Show from the specimens that the number of threads drawn out beneath the hem vary according to the coarseness of the material used—two, three, or four may be withdrawn. Get the pupils to draw out four threads, and do it along with them.

III. *Method of Working the Stitch.*—Call attention to the grouping of the vertical threads in threes or fours. Show how to fasten on as for a common hem, and tell pupils to hold their work exactly as for hemming, and then demonstrate on the Java band, and dictate the following:—

(1) Insert the needle immediately beneath where the cotton was drawn out on the hem.

(2) Take up four threads on the needle *horizontally*, as in Fig. 2. Explain that any number might be taken, according to the fineness of the material.

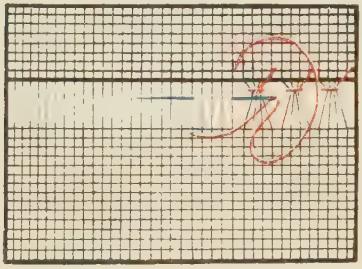


Fig. 2.

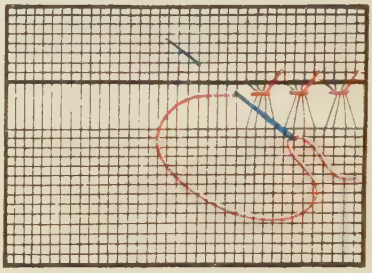


Fig. 3.

(3) Insert the needle as for a backstitch into the place at which it was last put in.

(4) Bring it out *as for ordinary hemming* on the edge of the fold, as in Fig. 3.

SWISS DARNING.

Apparatus.—Diagram of Swiss darning (Fig. 1) or Frame, filled with crimson or blue web in 12-ply fleecy wool, with darn done in white; web of P.P.A. or Frame with crimson knitting in 12-ply fleecy wool to be darned with white or some light colour.

Pupils' Materials.—Piece of stocking web 3 inches square; rug-needle or common darner with pink or blue wool or knitting cotton.

Introduce the lesson by showing the specimen in 12-ply fleecy wool (Fig. 1), and impress on pupils that the stitch is a facsimile of knitting.

Give the name Swiss Darning, and tell the pupils it is so called because it is very much practised in Switzerland.

I. *Swiss and other Darns Contrasted.*—By showing the large specimen,

elicit from pupils that it differs from the darns they have been previously taught in three ways:—

(1) It is always worked on the right side of the web.

(2) It is always worked from right to left, that is, in horizontal lines, not vertical ones.

(3) No loops are left.

II. *When Swiss Darning is Used.*—Point out that it is never used where

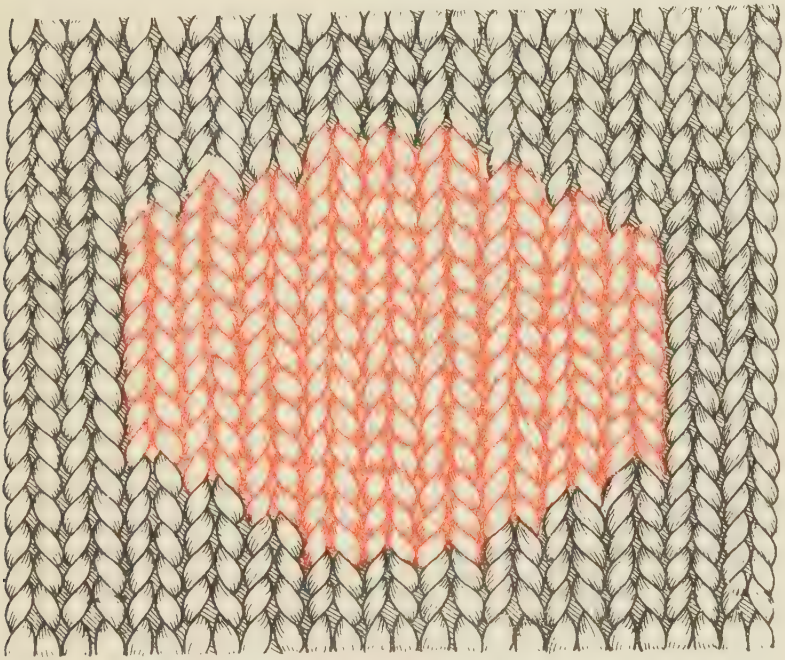


Fig. 1.

there is a hole, and that it is not used for every thin place, but is specially useful for—

(*a*) Sleeves of jerseys.

(*b*) Ladies' knitted combinations, &c.

(*c*) Knees of boys' knickerbocker stockings.

(*d*) Fingers of knitted gloves.

III. Remind the pupils that on the right side the web, when close, consists

of slanting lines lying in pairs running from right to left (Fig. 2), but, when stretched, a row of knitting winds out and in (Fig. 3), and that in Swiss darning they have just to follow the thread out and in.

IV. Draw the following diagram on B.B., and call the pupils' attention to it. (Fig. 4.)

V. *How the Stitch is Worked.*—Show the pupils, either from Fig. 4 or Knitted Frame, that, having fixed their thread on the wrong side by

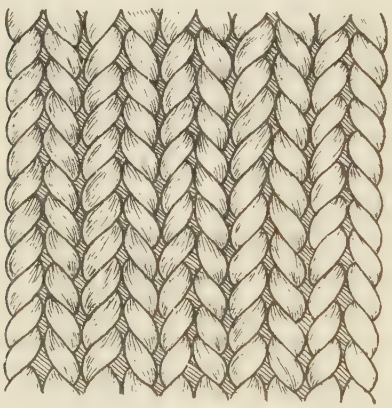


Fig. 2.

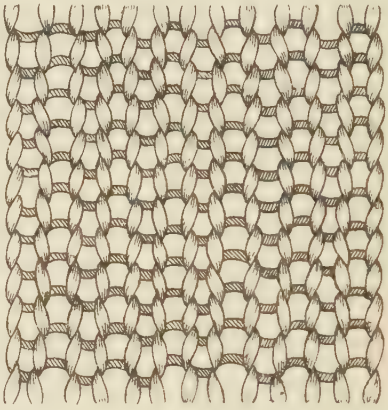


Fig. 3.

weaving their needle under and over the loops, they must bring through the needle to the front at 1, put it in at 2, and bring it out at 3. Explain that in doing this they have covered the half of a stitch, viz., from 1 to 2, and that the darn consists simply in covering the stitches.

VI. Explain that the second half of the stitch has now to be covered from 3 to 1. Show the pupils that to do this they must put in their needles at 1, and bring them out at 4. For the next stitch they put in their needles at 3, come out at 5, enter again at 4, and come out at 6, and so on.

VII. Impress on the pupils that they must not draw the thread too tightly, but leave it slack so as to cover the stitch and leave the web elastic. Turn round the frame, and show them that on the wrong side the darn looks like two rows of stitching.

VIII. Let pupils do in this way, say, six stitches, while the teacher does

the same. Impress on them that for the last stitch of the first row they must take the needle through to the back at 8, and so have the stitches complete.

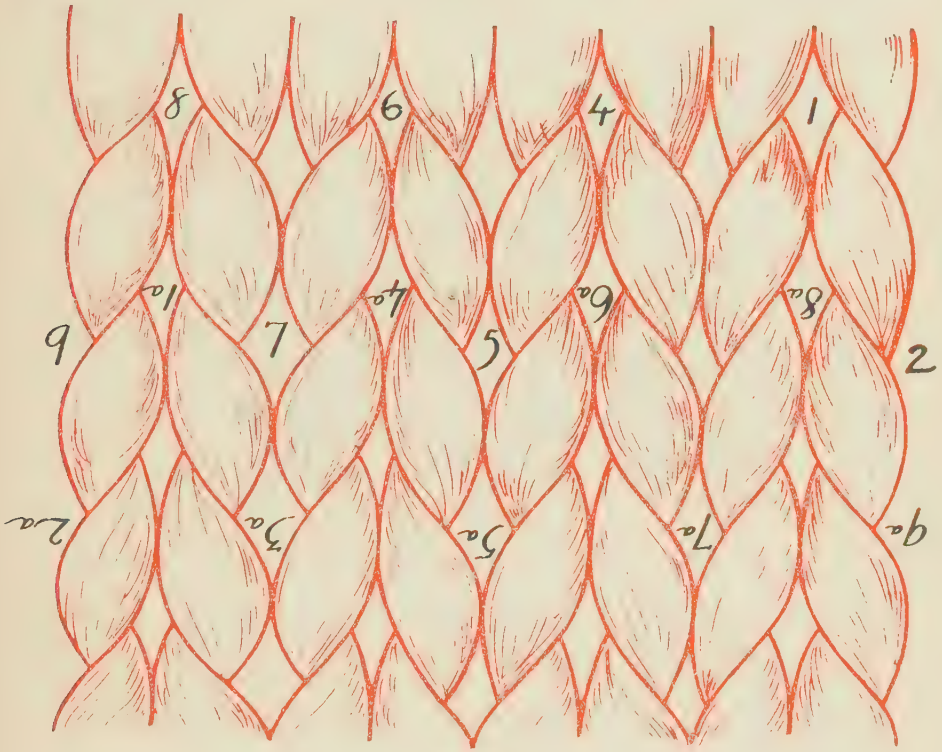


Fig. 4.

IX. For second row tell the pupils to turn the web round, so as to work anew from right to left.

Show them that for first stitch of the second row they must bring the needle up through the centre of the last loop on first row 1 *a*, put in their needle at 2 *a*, and bring it out at 3 *a*, and proceed. (Fig. 5.)

X. Get pupils to tell what rule in darning they are breaking by working it in the form of a square, and impress on them anew that an octagonal darn will be most satisfactory, especially on the knees of boys' knickerbocker stockings.

XI. Examine work, and comment on the faults noticed.
(1) Thread drawn too tight, and loops not entirely covered.
(2) Uneven rows.
(3) Snarls of thread left on wrong side of web, and ends not darned neatly in.

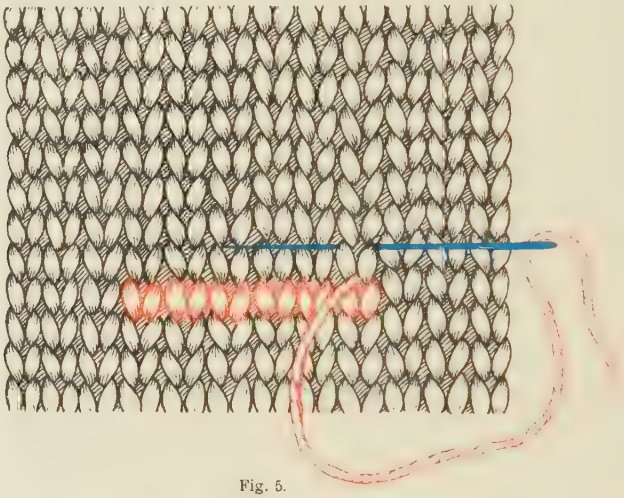


Fig. 5.

GRAFTING.

Apparatus.—Diagram of grafting; Frame filled in with stocking web in 12-ply fleecy wool, two rows of which should be knitted in a different colour and unconnected from the rest. These rows are to be picked out, and then grafted in before the class. (Fig. 1.)

Materials.—Piece of stocking web 3 inches square; darner and coloured wool.

Introduce by showing a stocking with a new hole in process of being woven, the sides of which are to be grafted; or show Griffith and Farran's diagram of the same.

Definition.—Do a few stitches on the frame, and elicit from the pupils

that "Grafting is the method by which we join two pieces of web or knitted material together by a stitch resembling knitting". Refer to the process of grafting a tree with a new branch from another tree. Draw from the pupils

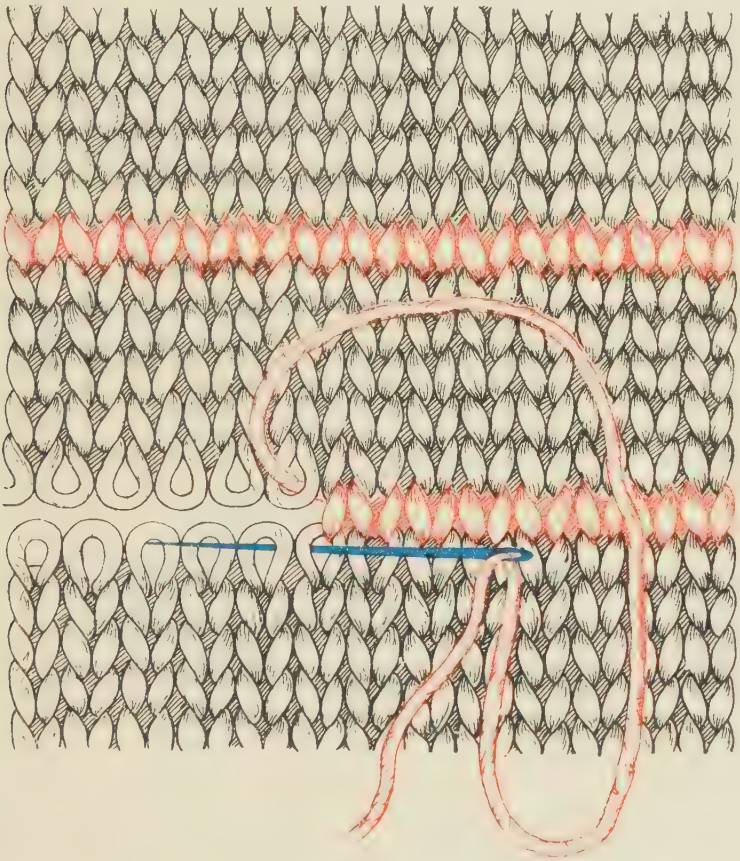


Fig. 1.

that grafting is similar to Swiss darning, only in the latter they cover a thin place whereas in the former they supply an extra row of knitting by a species of hand-weaving called grafting.

Preparation of Web.—With a piece of knitting done in 12-ply fleecy wool show how to divide it in two and clear out all the broken threads until the

loops of each piece are perfectly clear and distinct, just as they would be if they were to pick them up with their wires to refoot a new stocking.

Commencement of Thread.—Ask pupils to take up one piece of web, and, turning it to the wrong side, run in the thread, or weave it out and in at the back for a few stitches at the *left-hand* side, and bring the needle up through the first loop from the back to the front on the *right-hand* side.

Formation of Stitch.—Show from the frame that the stitch is worked

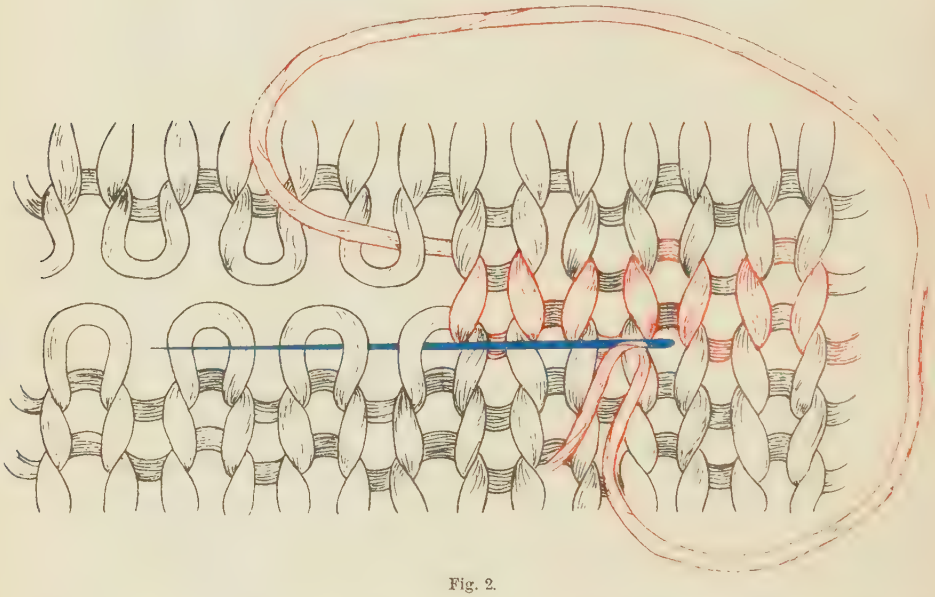


Fig. 2.

from right to left, as in Swiss darning. Call attention to the diagram, and show that the loops of the top part lie exactly opposite the open spaces between the loops of the lower part, as seen in Fig. 2.

Now get the pupils to take up their second piece of web, and with knitted frame show them how to insert the needle from *front to back* through its *first* loop, and bring it up again from *back to front* through the *second* loop, which finishes one half of first new loop. To complete this first new loop, show them that they must go through the *first loop* of upper web from *front to back*, and bring the needle up from *back to front* through the *second loop*.

How to Hold the two Pieces of Stocking Web.—Get the pupils to hold the two pieces of web, one above the other, across the first finger of left hand as for hemming, and continue working on the upper and lower webs *alternately*, going through two loops each time, always inserting the needle from front to back, and bringing it up from back to front.

Impress on pupils the necessity for—

(1) Not splitting or twisting the loops.

(2) Not drawing the thread too tightly, nor leaving it too slack.

Finishing off.—Show how to fasten off by taking the needle through to the wrong side, and darning the end of the thread in neatly.

Examine the work, and speak of the uses of grafting.

(1) To join a new heel or foot to a stocking.

(2) To join a sleeve or part of one into a jersey.

(3) For repairing knitted garments.

STOCKING-WEB DARN.

LESSON I.

Apparatus.—Card with two rows of holes punctured, 1 foot to be between each *row* and 1 inch between each *hole*; ditto with several rows of the stitch done in 12-ply fleecy wool. (Figs. 1 and 5.)

Materials.—Card $4\frac{1}{2}'' \times 3''$; ruler, pencil; needle and No. 30 blue thread; darner and pink wool.

Introduction.—Refer to lesson on Swiss darning, and tell the pupils they are now to learn how to fill up a hole with the same stitch, but as it is rather difficult they are not to be taught on web at first, but on cards.

Show the large specimen cards, so that the pupils may have some idea of what they are going to do.

I. *Preparation of Card.*—Draw two horizontal lines on B.B. parallel to each other, about 1 foot apart, and get pupils to do the same on their cards, the distance between the lines on the cards to be rather more than an inch.

II. With coloured chalk place seven dots 1 inch apart on the upper line,

and 6 on the lower line—those on the lower line to be exactly in the middle, between the dots of the upper line. Get pupils to mark these dots on their cards $\frac{1}{6}$ inch apart, and having examined them to see if they are accurately done, make them draw their darners through each dot, so as to form 7 holes on the top row and 6 on the lower row, as in Fig. 1.

III. Number the dots on B.B. on the lower line, beginning at the right-hand side, 1, 2, 3, 4, 5, 6, and those on the upper line, beginning at the same

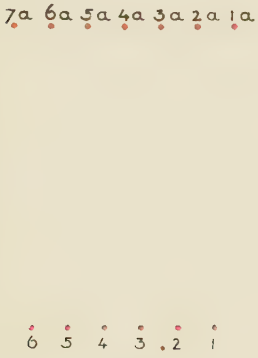


Fig. 1.

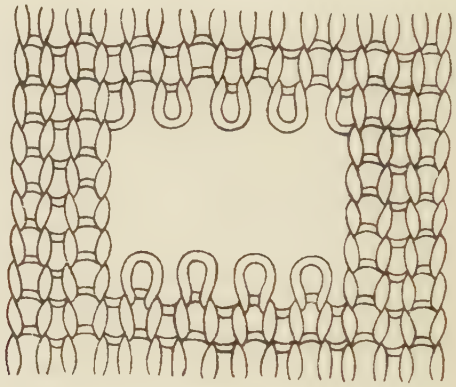


Fig. 2.

side, 1*a*, 2*a*, 3*a*, 4*a*, 5*a*, 6*a*, 7*a*. Show pupils that these holes are to represent the loops on the web.

IV. Explain to pupils why there are seven holes on the top row and six on the lower one.

Remind them (1) that if a square or oblong hole be taken out in stocking web there are so many complete loops at the top or bottom, and the same number of loops opposite, only, one of the loops is in two halves. Thus, if there be six whole loops at the foot of the hole, there will be five and two halves at the top of it, the half loops being at the sides; (2) that every loop faces the space between the loops, therefore the holes on the lower row of the card face the space between the holes on the upper row, and *vice versâ*. (Fig. 2.)

V. *Stranding.*—Explain to pupils that the space between the two rows of loops represents the hole, and that they must put in stranding threads to form a foundation, on which they are to darn or weave loops with the hand.

VI. On the large card show pupils how the stranding has to be done.

Ask pupils to take the needle with the blue thread, and, holding the card with the six holes downwards, fasten on their threads by taking their needles through the card a little to the right of 1, and tying them firmly.

Having got this done, show the pupils how to bring their needles up from back to front through hole 1. Next tell them to (and work each step on large card before them)—

(1) Put their needles in from front to back at $1a$, and bring them up from back to front at $2a$.

(2)	„	„	1,	„	2.
(3)	„	„	$2a$,	„	$3a$.
(4)	„	„	2,	„	3.
(5)	„	„	$3a$,	„	$4a$.
(6)	„	„	3,	„	4.
(7)	„	„	$4a$,	„	$5a$.
(8)	„	„	4,	„	5.
(9)	„	„	$5a$,	„	$6a$.
(10)	„	„	5,	„	6.
(11)	„	„	$6a$,	„	$7a$.
(12)	„	„	6, and finish off by darning		

the thread in and out of the stitches seen on the back of the card. (Fig. 3.)

Show the pupils that the needle and thread must go twice into every hole,

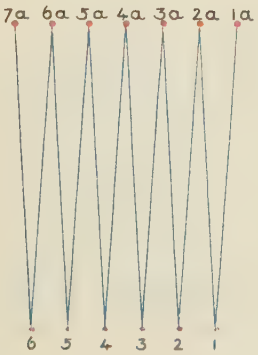


Fig. 3.

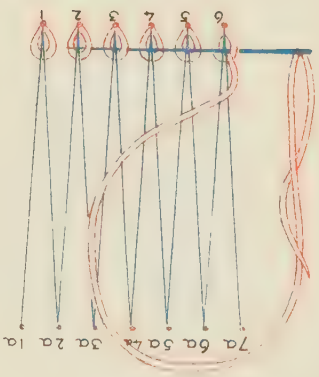


Fig 4

except the side ones $1a$ and $7a$, which have only one thread passing through them.

How to Form the Stitch—1*st Row.*—With large card show the pupils that they must bring through their needles at hole 1, and passing it under the two foundation strands from right to left, insert it anew in hole 1, draw thread through, leaving a loop about $\frac{1}{6}$ inch long. Pass needle over to hole 2, and repeat the same process to the end of the row.

Ask some pupils to come to the front, and do a stitch each on the large card. Get the pupils to take up their cards and do the same.

2*nd Row.*—Show (1) that, as in Swiss darning, the pupils must turn their cards completely round, so that what was the bottom row becomes the top one. (Fig. 4.)

(2) That as the thread is on the under side of the card, the pupils must bring it up through the card right in the centre of what is now the first right-hand loop.

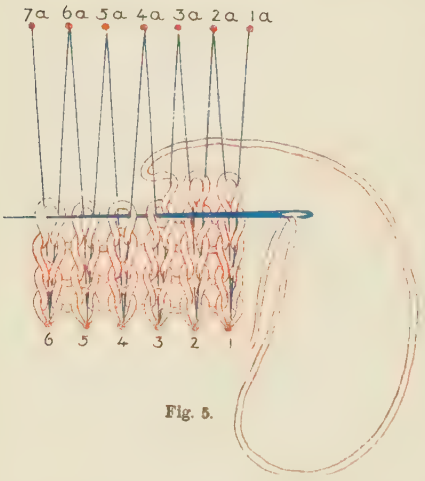


Fig. 5.

(3) That the pupils must pass the needle *under the two foundation threads* as before, and insert the needle in the *middle of the 1st loop*, and bring it out in the *middle of the 2nd loop*, without passing through the card. Get pupils to do this.

3*rd Row.*—Turn round work, and bring needle through the 1st loop without going through the card.

Impress on the pupils that the needle must always come out between the stranding threads as well as in the middle of the loops, and that when going in the second time into every loop, the needle should always go to the *left* of the thread already in it, so that there may be no twists or splitting of threads.

Work along with pupils till the space between the two rows of holes is covered, and then show them how to graft the last row into the upper row of holes.

Show them that the stranding threads may now be cut and picked out if it be thought advisable.

STOCKING-WEB DARN.

LESSON II.

Apparatus.—Perfect specimen of the darn in 12-ply fleecy wool; frame filled in with web in 12-ply fleecy crimson wool; sacking needle with white or gray fleecy wool.

Pupils' Materials.—Piece of stocking web 3 inches square; needle and blue thread; darner and pink worsted.

Introduction.—Show specimen of perfect darn, and refer to the lesson the pupils got on cards.

Uses.—Tell the pupils that this is the neatest and most perfect method

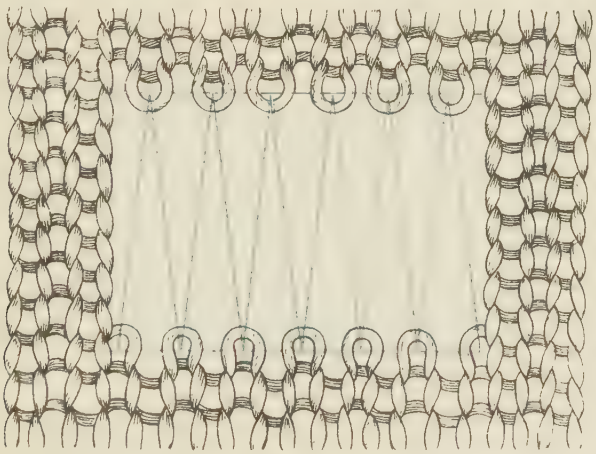


Fig. 1.

of mending jerseys and injured parts of all other coarse garments, where any other ordinary darn would be unsightly, but that the darn requires more patience and skill to make it look nice than one is generally willing to bestow.

Preparation of the Hole.—Show the pupils how to make the hole, reminding them that it is done exactly in the same way as they prepared it

for a Class V. Darn. As some pupils may not know how to do it, show with piece of coarse web how to do it, and dictate the following:—

(1) Cut one loop, and open out the thread till there are three clear loops on the left-hand side. Do the same towards the right, when there will be 6 complete loops above and 5 and 2 halves beneath.

(2) Turn round the work so as to have the 6 complete loops nearest the

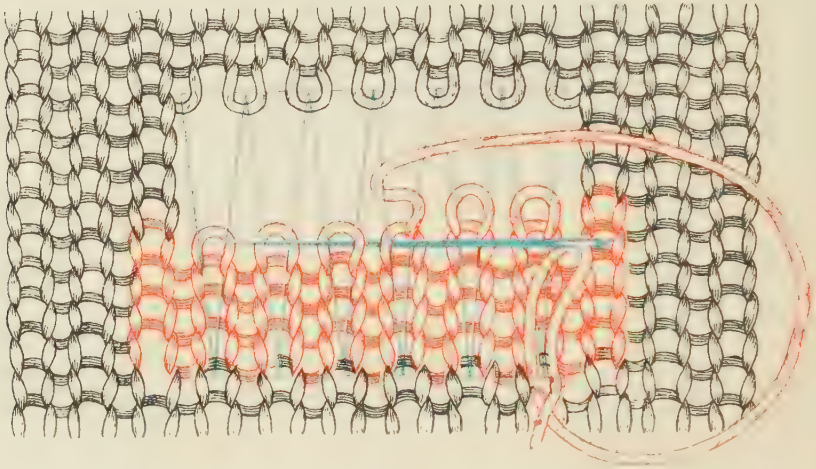


Fig. 2.

thumb. Put the darner between the 3rd and 4th loops under the connecting thread, and pull out the 6 loops. Cut this thread into two equal portions.

3rd, 4th, 5th, 6th rows. Repeat No. 2, after which the hole will be about 1 inch square.

Having cleared out the hole as in Fig. 1, show the pupils how to baste back the frayed-out threads, not as they did in the Class V. Darn, but on the wrong side of the web.

Stranding of Hole.—Show on the knitted frame that this is done exactly as they did it on the cards, only they have loops instead of holes.

Tell the pupils to hold the work over their first and second fingers, and keep it in place by the thumb and third finger. If they prefer, they may baste it on a piece of stiff paper or cardboard, but they are less likely to drag the darn if they simply hold it over the fingers. (The hole is to be held with the row of complete loops down.) Having fastened their thread at the back

of the web (the thread with which they basted down the ends will do), bring the needle up at the right-hand corner whole loop. (Fig. 1.) Insert the needle at the top half loop, and bring it out at the next loop, then return to the first loop, and proceed to the end, when they must fasten the thread securely on the wrong side by a backstitch, and cut off the end left. Impress on the pupils the necessity for not contracting the hole by darning the stranding threads too tightly.

Filling up of Hole with Stocking-web Stitch.—When the pupils have got

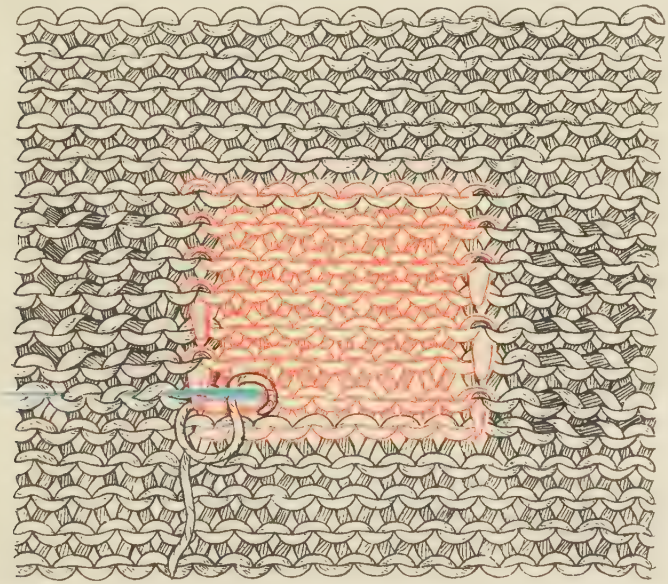


Fig. 3.—Wrong Side of the Darn, with Needle inserted to draw through one of the threads left at the beginning.

the stranding finished, show them by means of the Knitted Frame that, having fastened their thread in the ordinary way, they bring their needle up from the back to the front through the loop *immediately to the right* of the one where the stranding commenced.

This loop is Swiss darned, and the needle is then brought through the loop where the stranding commenced. Get pupils to do this, and proceed as they did on the cards, using the loops instead of the holes.

Tell the pupils to be careful to make the loops correspond in size with those of the web they are darning.

Show them on coming to the end of the row that they must carefully Swiss darn one loop of the web at the left-hand side, then turn their work completely round, and proceed as before. (Fig. 2.)

Grafting.—When the hole is filled up, show with frame how to graft the last row of darn to the loops on which the foundation strands lie.

Finishing off of Threads.—Get pupils to remove the stranding threads and

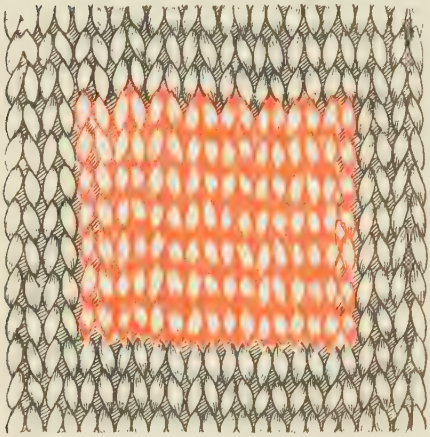


Fig. 4.—Right Side of Darn.

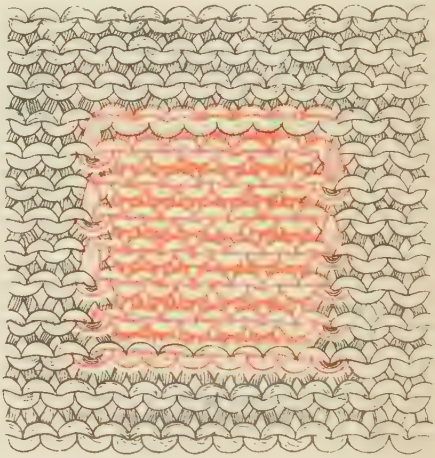


Fig. 5.—Wrong Side of Darn.

those with which they basted down the unravelled threads at the commencement. Turn round the frame to the back, and show them how to darn each thread neatly through three or four loops of the row to which it belongs, and then cut off. (Fig. 3.) Impress on them the necessity for darning these threads loosely, so as not to impair the elasticity of the web-tissue.

Tell pupils there are several other ways of connecting the Stocking-web Darn to the web itself, but that this is a very neat and effective method.

When completed the darn should look as in Figs. 4 and 5.

PART II.—CUTTING OUT.

KEY TO THE CUTTING-OUT DIAGRAMS.

1. The diagrams are all drawn to $\frac{1}{8}$ inch scale.

2. Each garment, or part of a garment, is inclosed in a space technically called a "field" (bounded by four straight lines), the corners of which are lettered A, B, C, D respectively.

3. If any of the four lines bounding a "field" be dotted it shows that the cloth or paper (out of which the shape has to be cut) must be folded along that line.

4. Each particular point of a garment is marked by *figures*. These figures denote the *number of inches* which lie between the points so marked and one or other of the corner letters. Most of the distances are calculated from A and B.

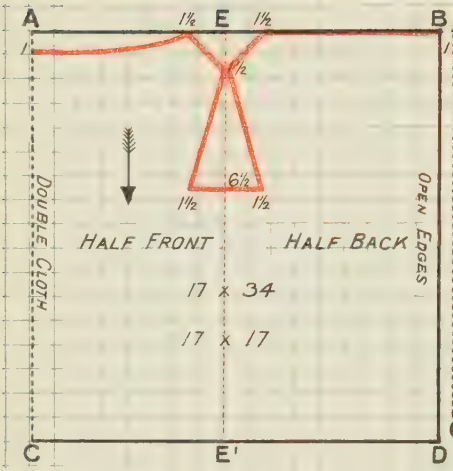
5. The black arrows round the edge of the field mark the letter from which the distance in inches is calculated.

6. Horizontal or perpendicular *dotted* lines *within the "field"* show that the distance has to be calculated *not from the corner letters* but from some point on one of the lines which bound the field.

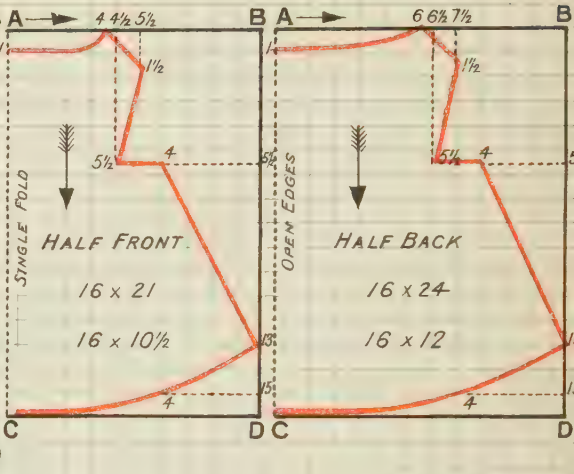
7. Arrows *within* the field mark the *selvedge* way of the cloth.

8. The figures within each "field" show the length and breadth of the "field", or in other words the amount of cloth required for the cutting out of the garment. The length is *invariably* put to the *left-hand* side of the line.

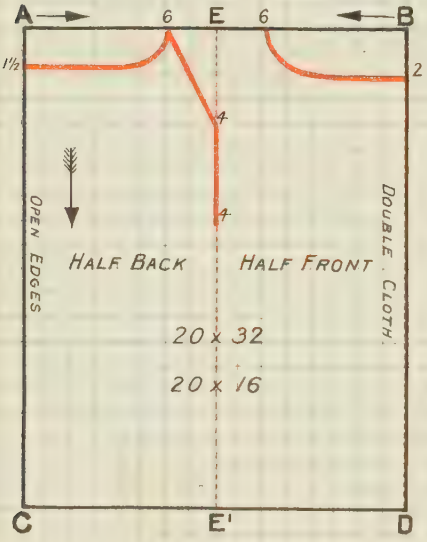
No. II.



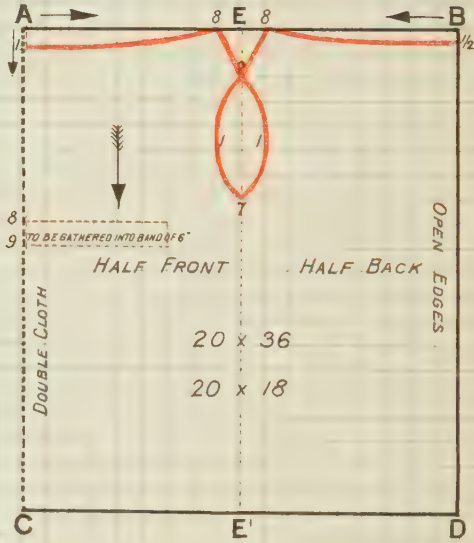
No. I.

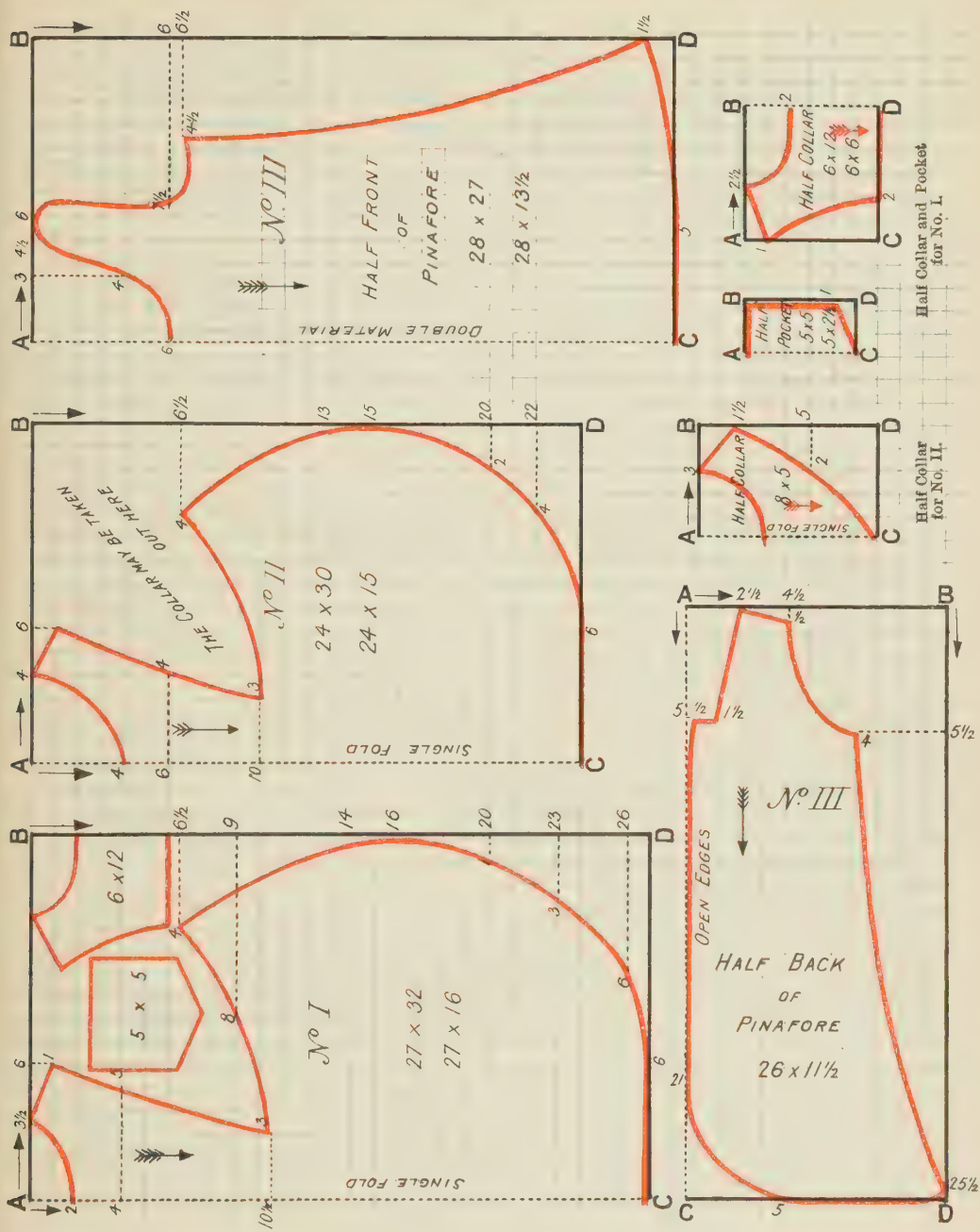


No. III.—Cottage Pinafore.

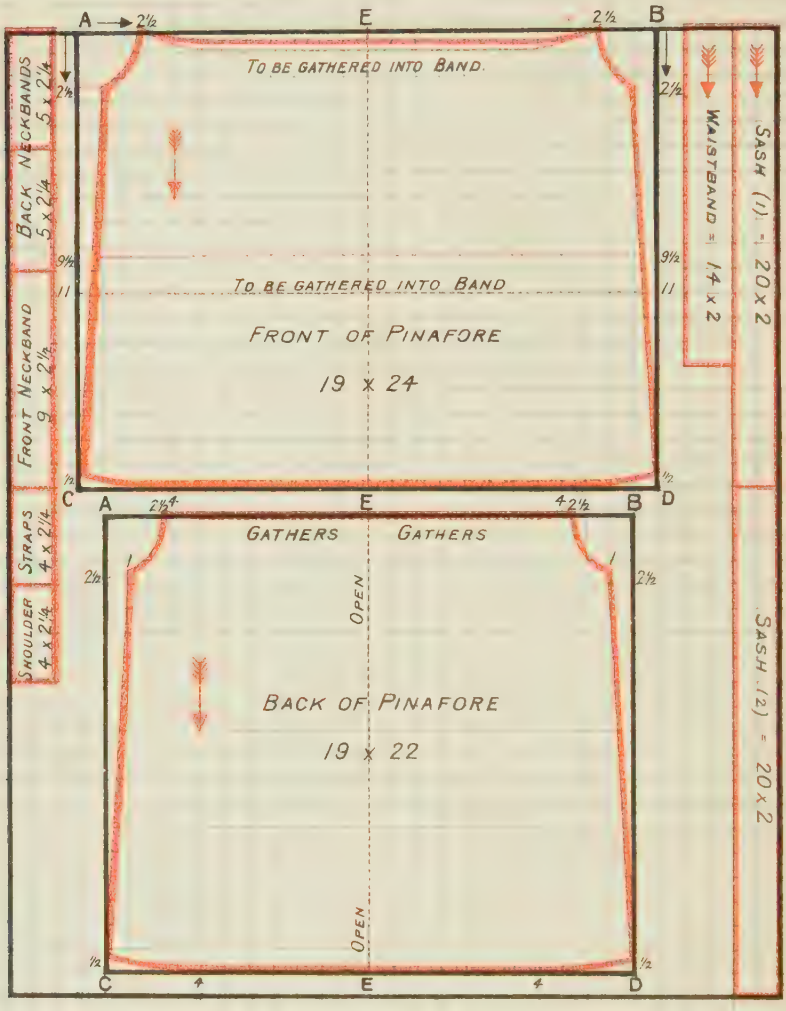


No. IV.




No III
HALF FRONT OF PINAFORE
28 x 27
28 x 13½
DOUBLE MATERIAL
HALF COLLAR
6 x 1½
6 x 6
HALF POCKET
5 x 5
5 x 2½
Half Collar and Pocket for No. I.
HALF COLLAR
8 x 5
SINGLE FOLD
Half Collar for No. II.
No II
24 x 30
24 x 15
THE COLLAR MAY BE TAKEN OUT HERE
SINGLE FOLD
No III
OPEN EDGES
HALF BACK OF PINAFORE
26 x 11½
6 x 12
5 x 5
No I
27 x 32
27 x 16
SINGLE FOLD

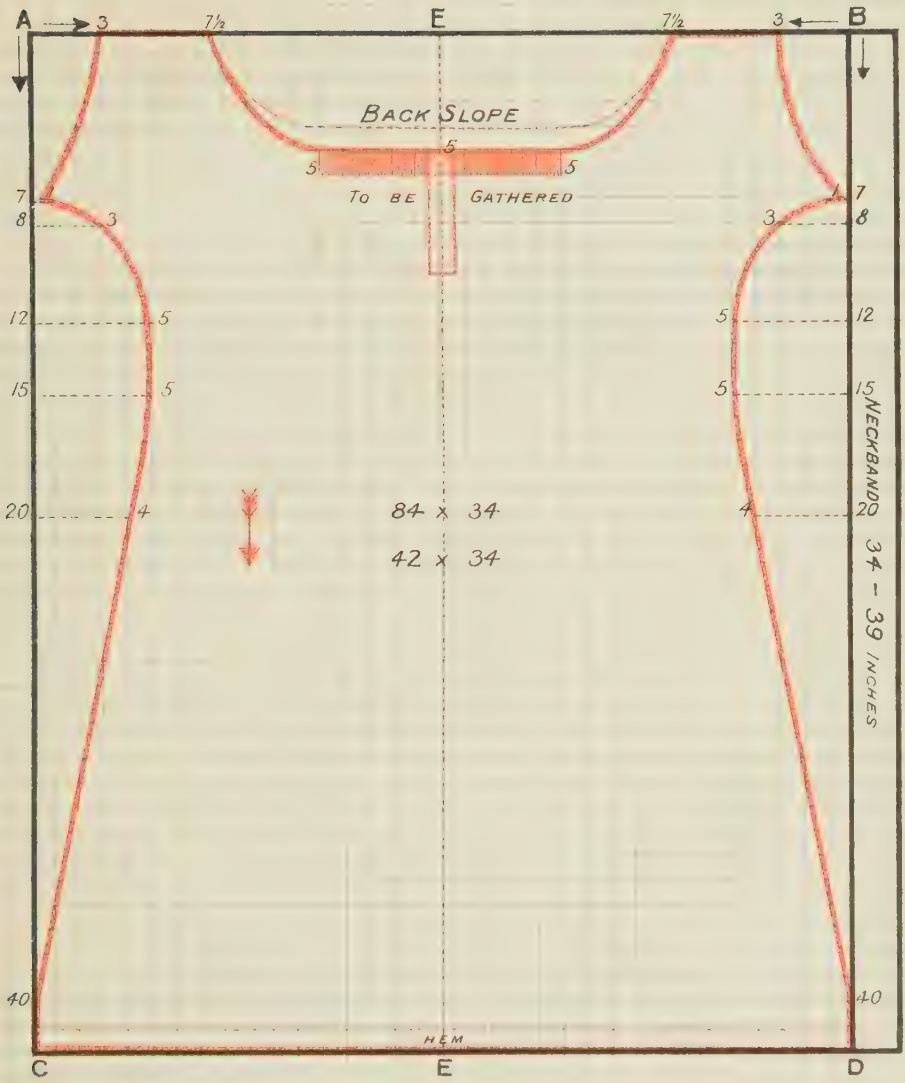
PINAFORE WITH SHOULDER STRAPS FOR CHILD OF 2 YEARS.



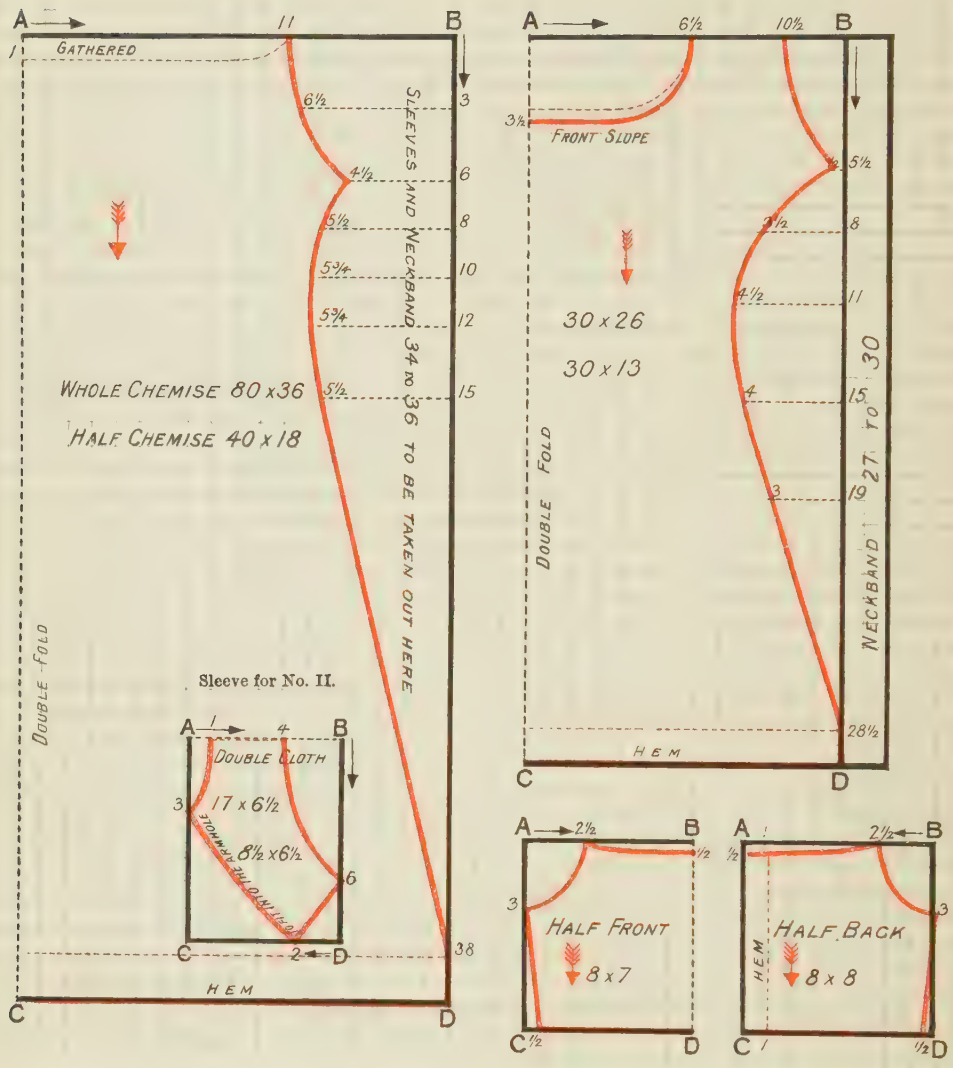
N.B.—The field for the whole pinafore is 40″ × 32″.

N.B.—For child of 6 or 7 years, front and back widths may be alike 25″ long and 28″ broad. Leave side-seams straight, and slope out for armholes

Front Yoke or Neckband	$10\frac{1}{2} \times 3\frac{1}{2}$
Back Yokes	$5\frac{1}{2} \times 3\frac{1}{2}$
Shoulder Straps	$6 \times 3\frac{1}{2}$


A
B
E
C
E
D
3
7½
7½
3
BACK SLOPE
5
5
5
TO BE GATHERED
7
8
3
3
7
8
12
5
5
12
15
5
5
15
20
4
4
20
40
40
84 x 34
42 x 34
NECKBAND 34 - 39 INCHES
HEM

No. II..

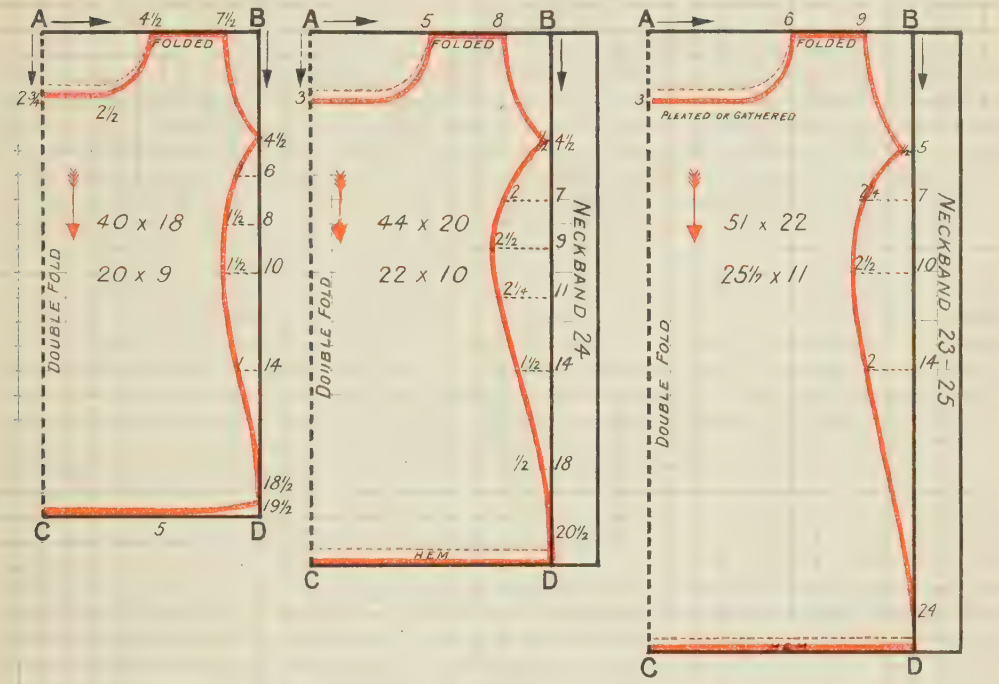


CHILD'S PETTICOAT BODICE.

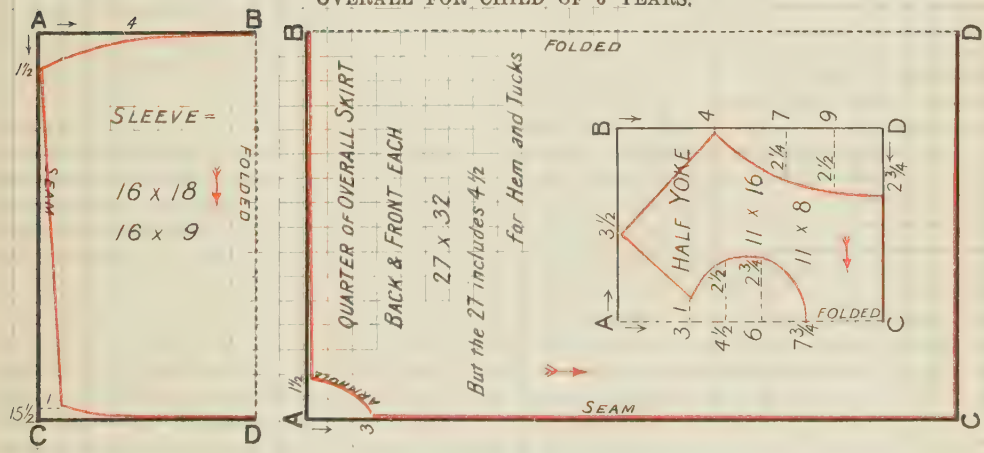
HALF CHEMISE
FOR CHILD OF 5 YRS.

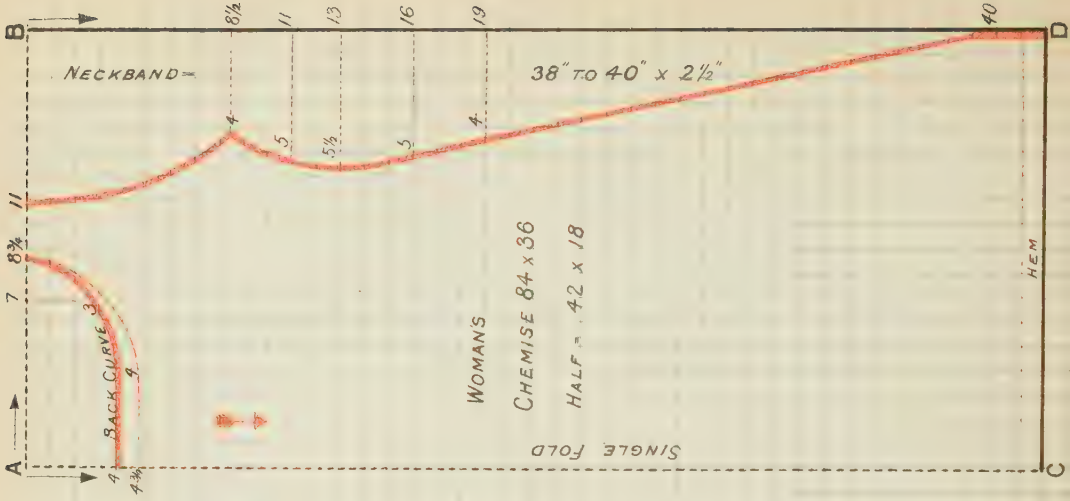
HALF CHEMISE
FOR CHILD OF 7 YEARS.

HALF CHEMISE
FOR CHILD OF 9 YEARS.

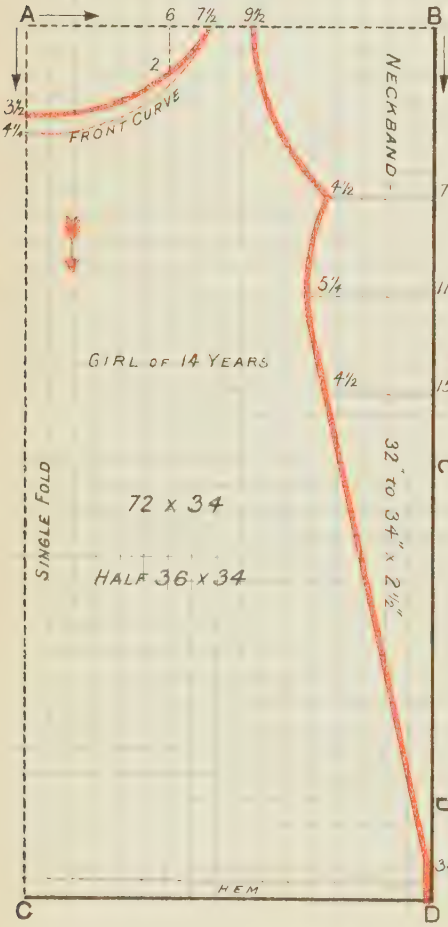


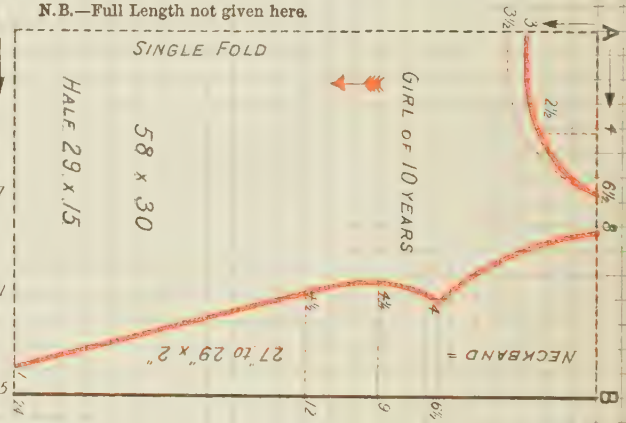
OVERALL FOR CHILD OF 6 YEARS.

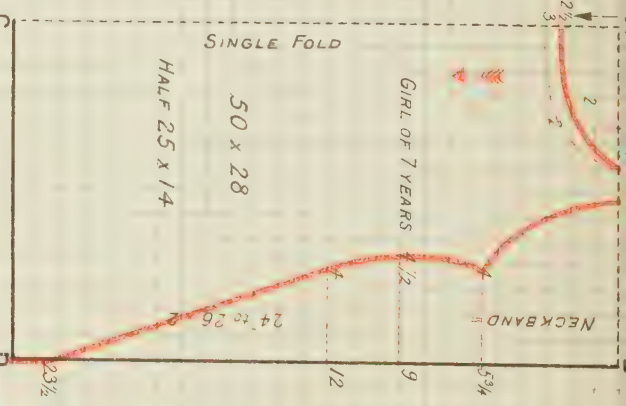




N.B.—Full Length not given here.

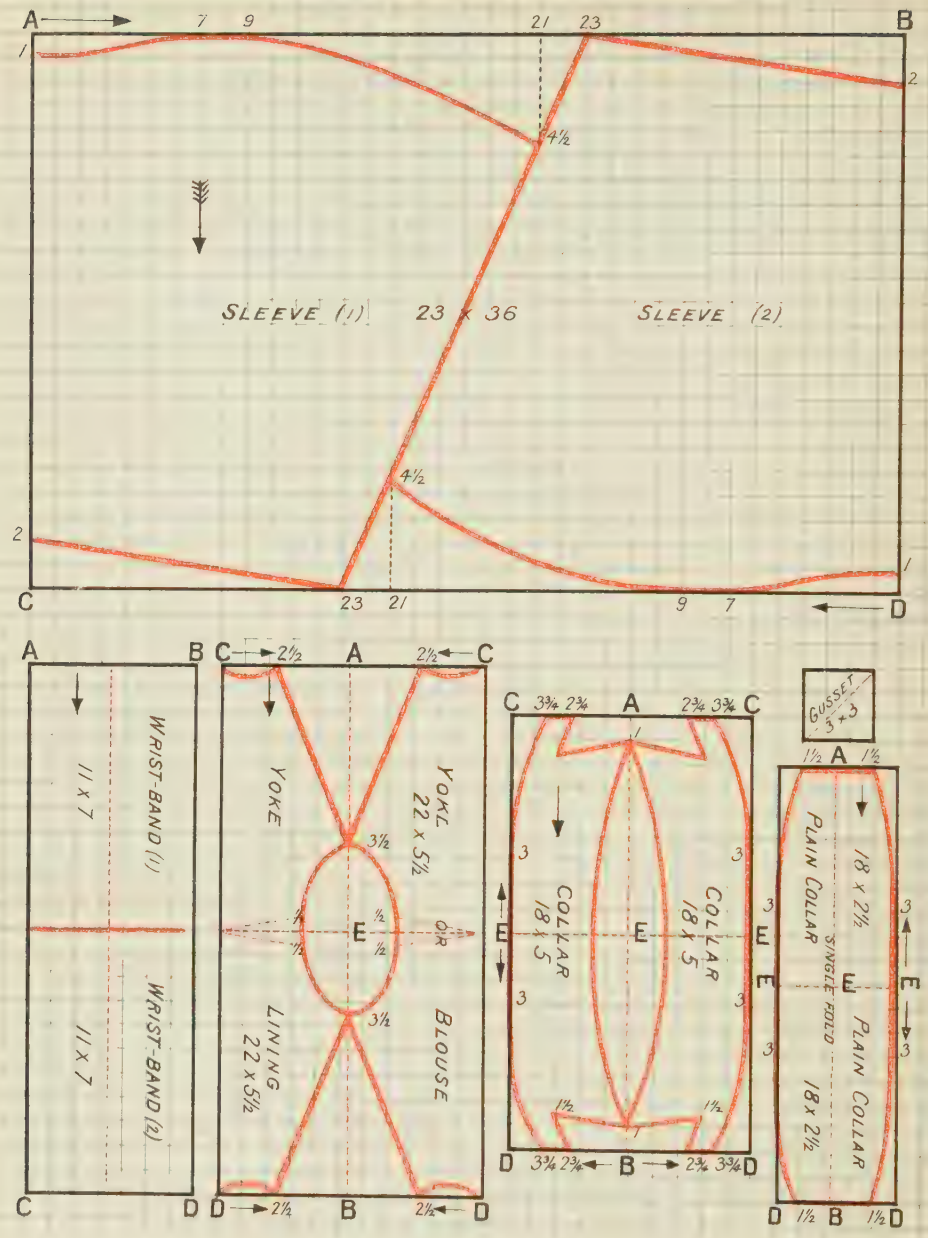


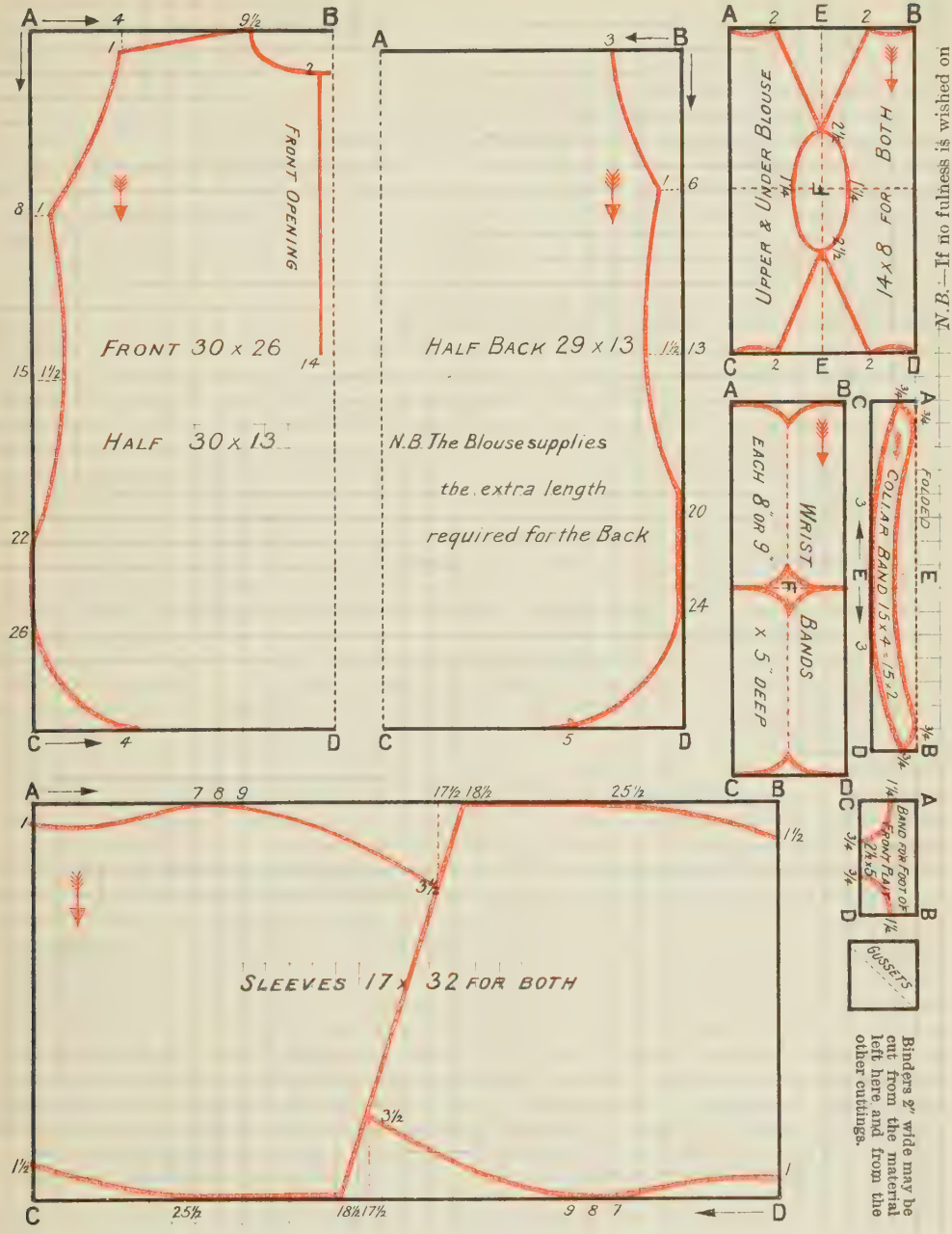




N.B.—Chemises with Narrow Shoulders and little if any Sleeve for those who prefer such.

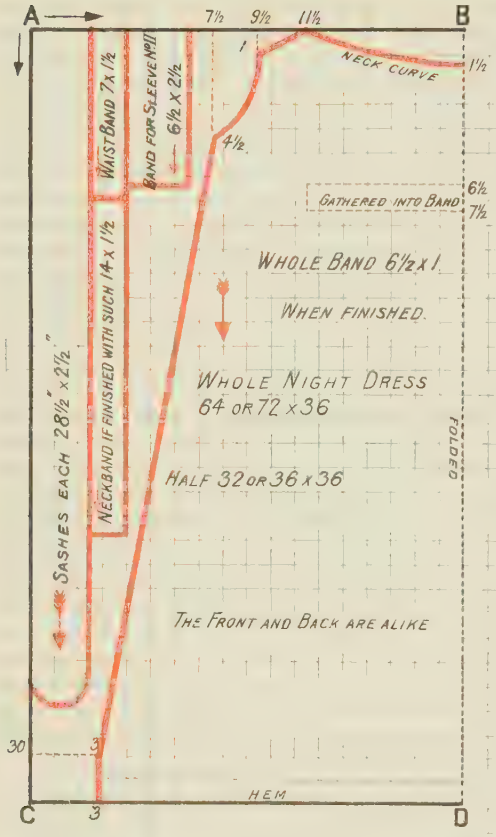
A
3
12
E
12
3
B
1½
1½
3
HEM FOR RIGHT SIDE = 1 INCH
FRONT OPENING
HEM FOR LEFT SIDE = 2 INCHES
17
10
10
FRONT 47 x 34
BACK 49 x 36
SIDE SEAM
SIDE SEAM
36
36
C
5
E'
5
D

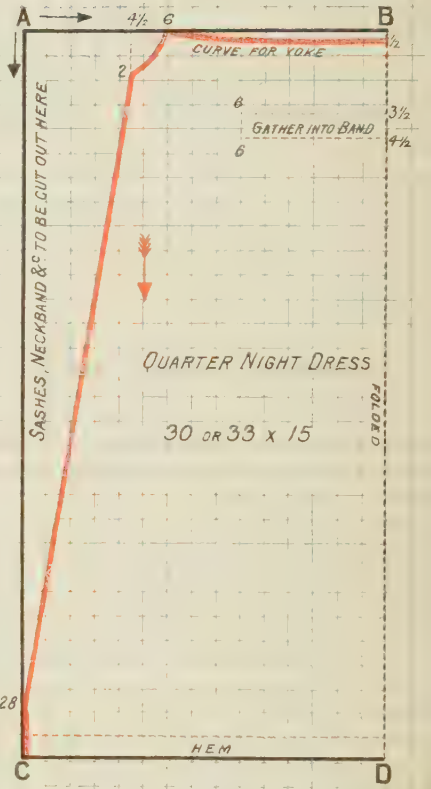

A
B
C
D
7
9
21
23
4½
SLEEVE (1) 23 × 36
SLEEVE (2)
WRIST-BAND (1)
11 × 7
WRIST-BAND (2)
11 × 7
YOKE
YOKE 22 × 5½
LINING 22 × 5½
BLOUSE
COLLAR 18 × 5
COLLAR 18 × 5
GUSSET 3 × 3
PLAIN COLLAR
SINGLE FOLD
18 × 2½
PLAIN COLLAR
18 × 2½


FRONT OPENING
FRONT 30 x 26
HALF 30 x 13
HALF BACK 29 x 13
N.B. The Blouse supplies the extra length required for the Back
UPPER & UNDER BLOUSE
BOTH FOR 8 x 14
WRIST BANDS
EACH 8" OR 9" x 5" DEEP
COLLAR BAND 15 x 4 = 15 x 2
FOLDED
BAND FOR FOOT OF FRONT FLAP 2" x 5"
GUSSETS
SLEEVES 17 x 32 FOR BOTH

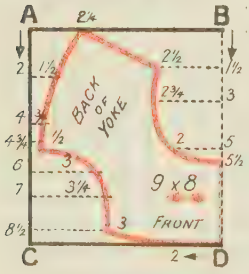
N.B.—If no fulness is wished on the shirt, make this blouse 15" x 8".

Binders 2" wide may be cut from the material left here and from the other cuttings.

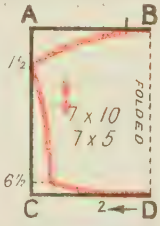




A. Half Yoke for No. II.

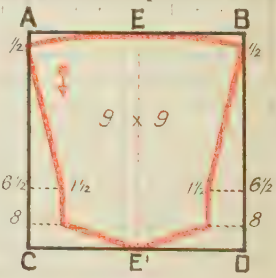


B. Sleeve for Band for I. or II.

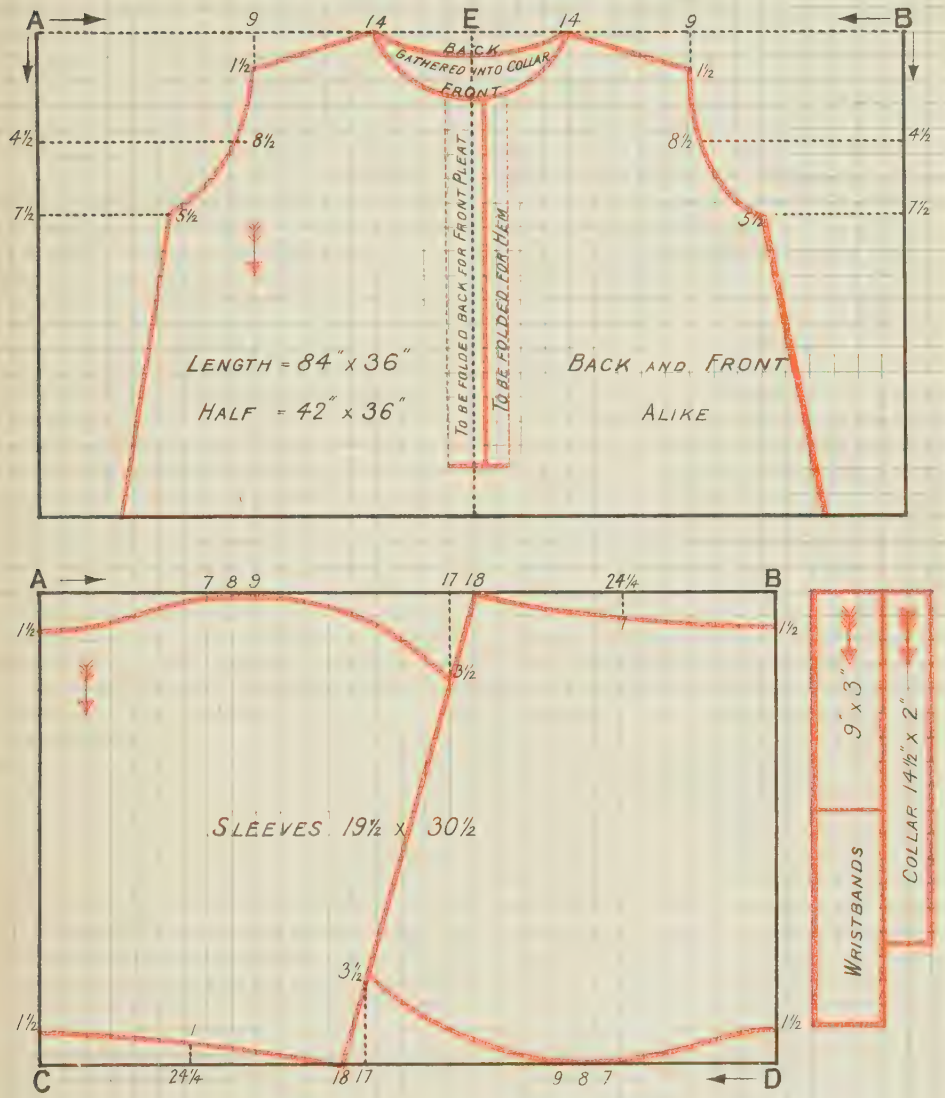


B. Band=6" × ¾" when finished.

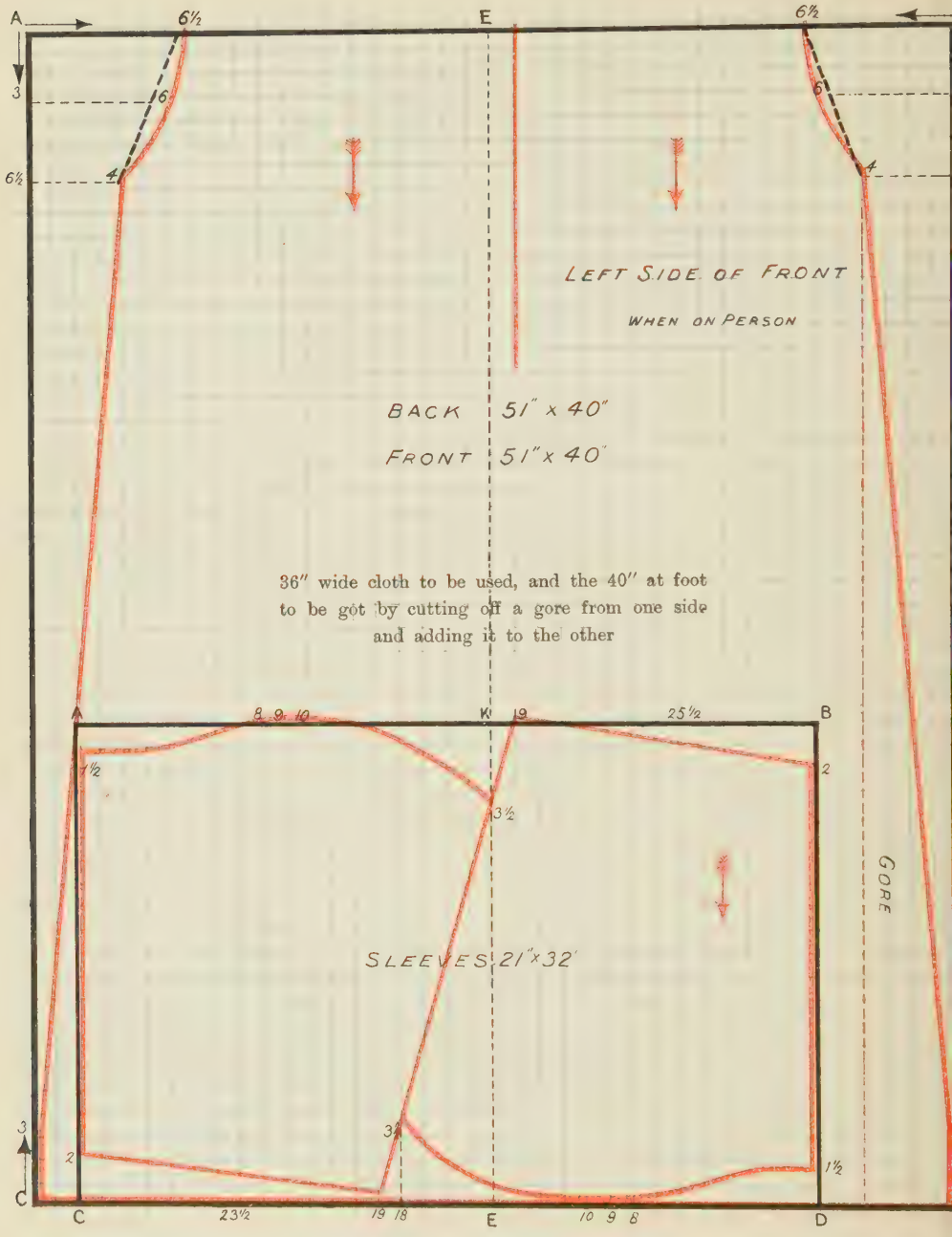
C. Sleeve with turned-up Cuff for I. or II.



UPPER PART OF NIGHT-DRESS WITHOUT BLOUSE FOR GIRL 12 TO 15 YEARS, WITH SLEEVES, &c.

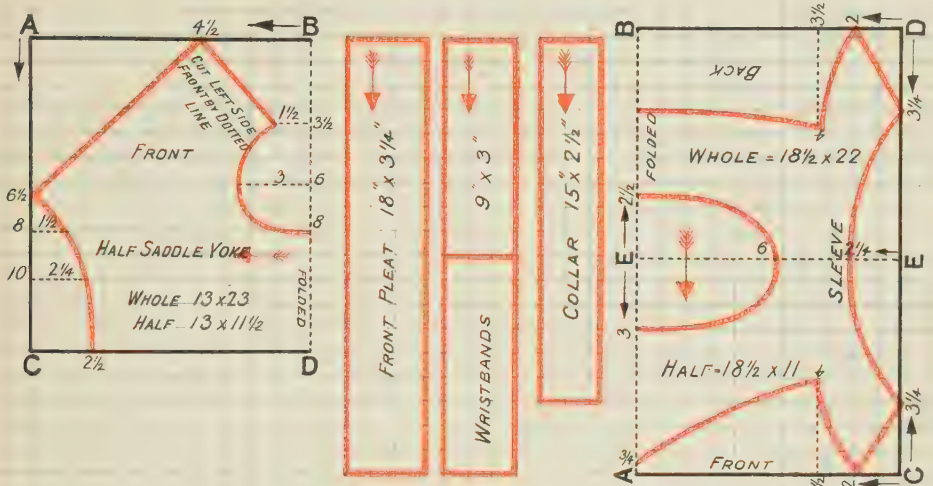


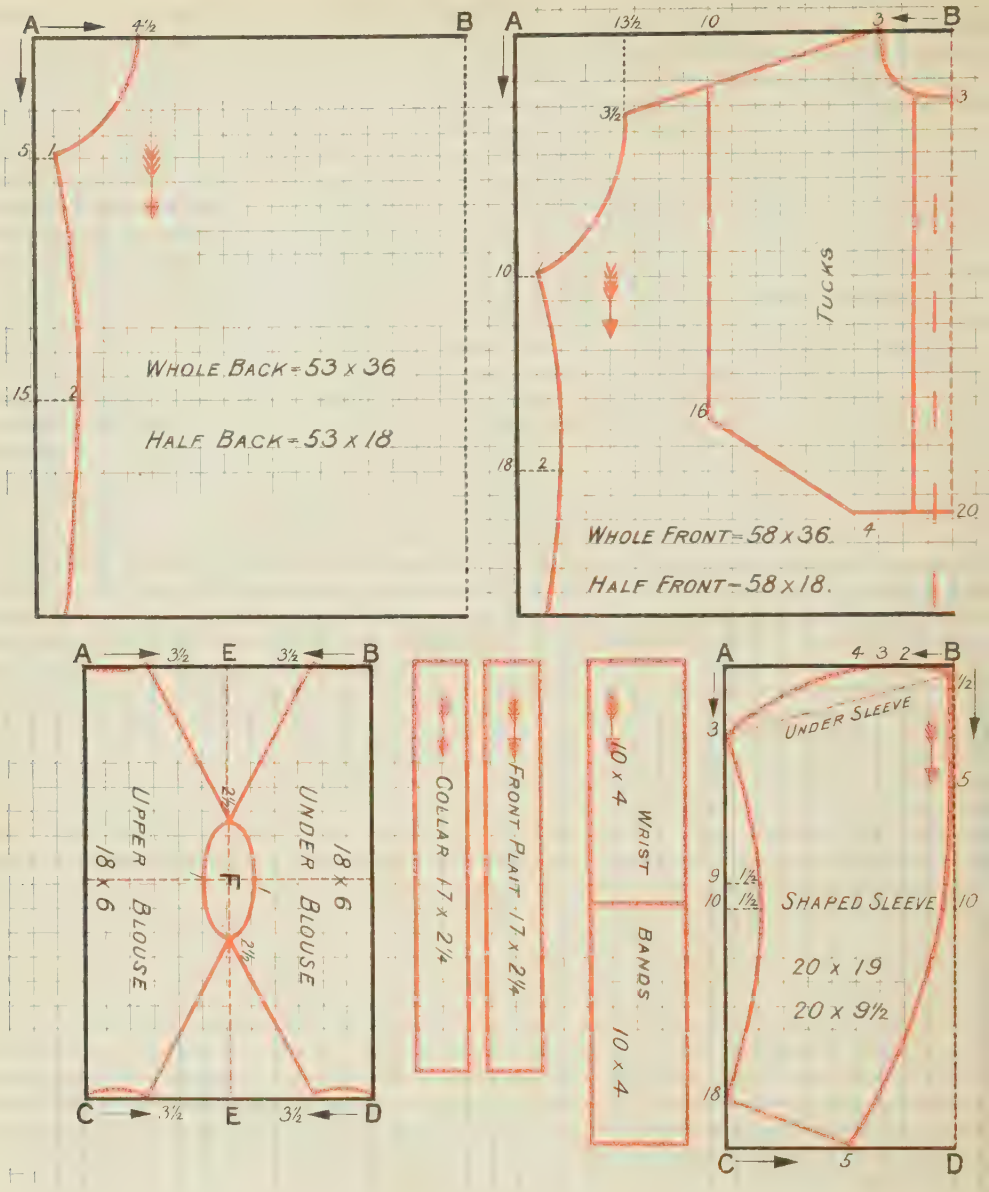
NIGHT-DRESS WITH YOKE FOR GIRL OF 15 YEARS (OR WOMAN'S SMALL SIZE)



YOKE, &c., OF NIGHT-DRESS FOR GIRL OF 15 YEARS.

HALF YOKE AND SLEEVE FOR CHEMISE.

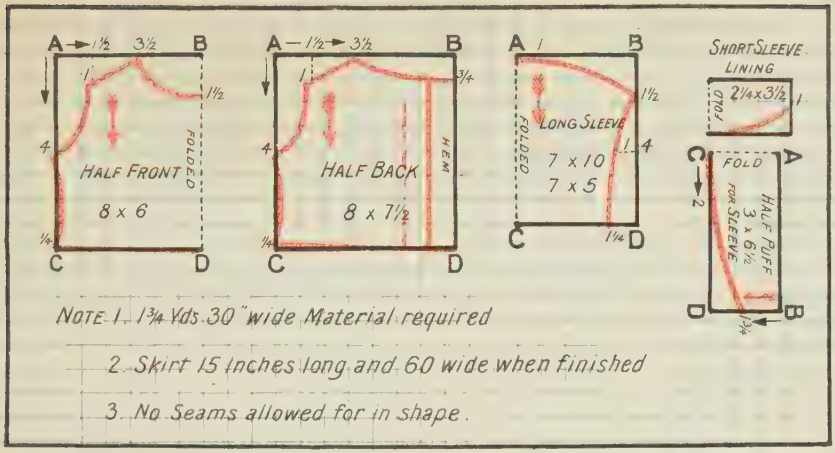




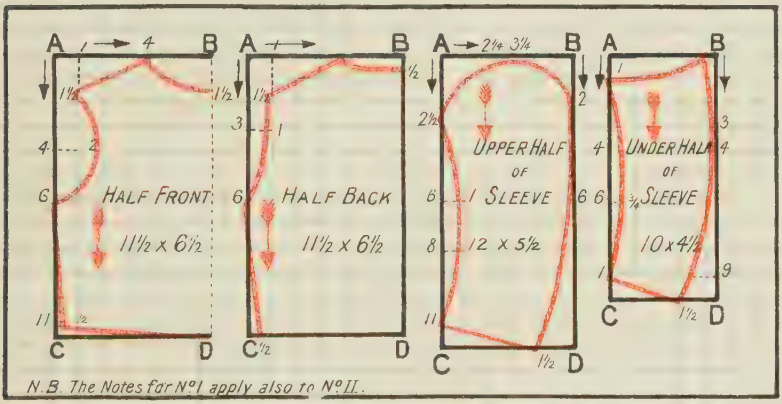
Note 1.—The armhole curves are for the shaped sleeve, and seams are not allowed for in the shape.

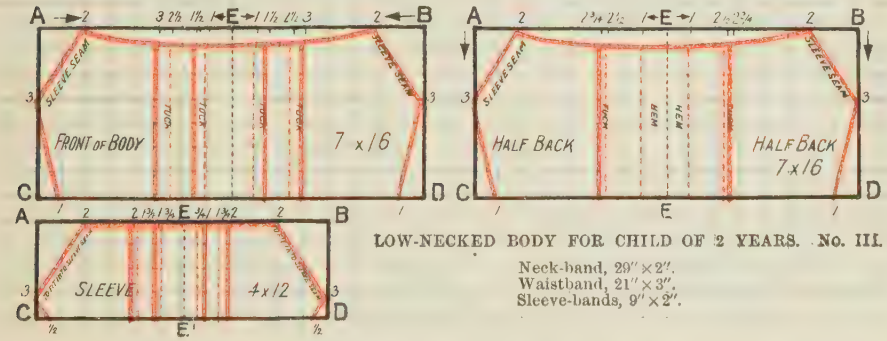
2.—If the plain sleeve is used, measure down from A for these curves 6″ and 11″ respectively, instead of 5″ and 10″.

3.—The skirt for the yoke on page 244 would measure 53″ to 56″ long by 36″ to 40″ broad, for both back and front. Mark off a square of 5″ for the armhole curves: measure *about* 2″ inwards at the foot of the square where the top of the side seams would be, and (curving round from the 5″ on the top of the square to the 2″ at side seams) slope for the sides to within 2½″ of the foot of the night-dress.



FROCK BODICE FOR CHILD OF 2 YEARS.—II.

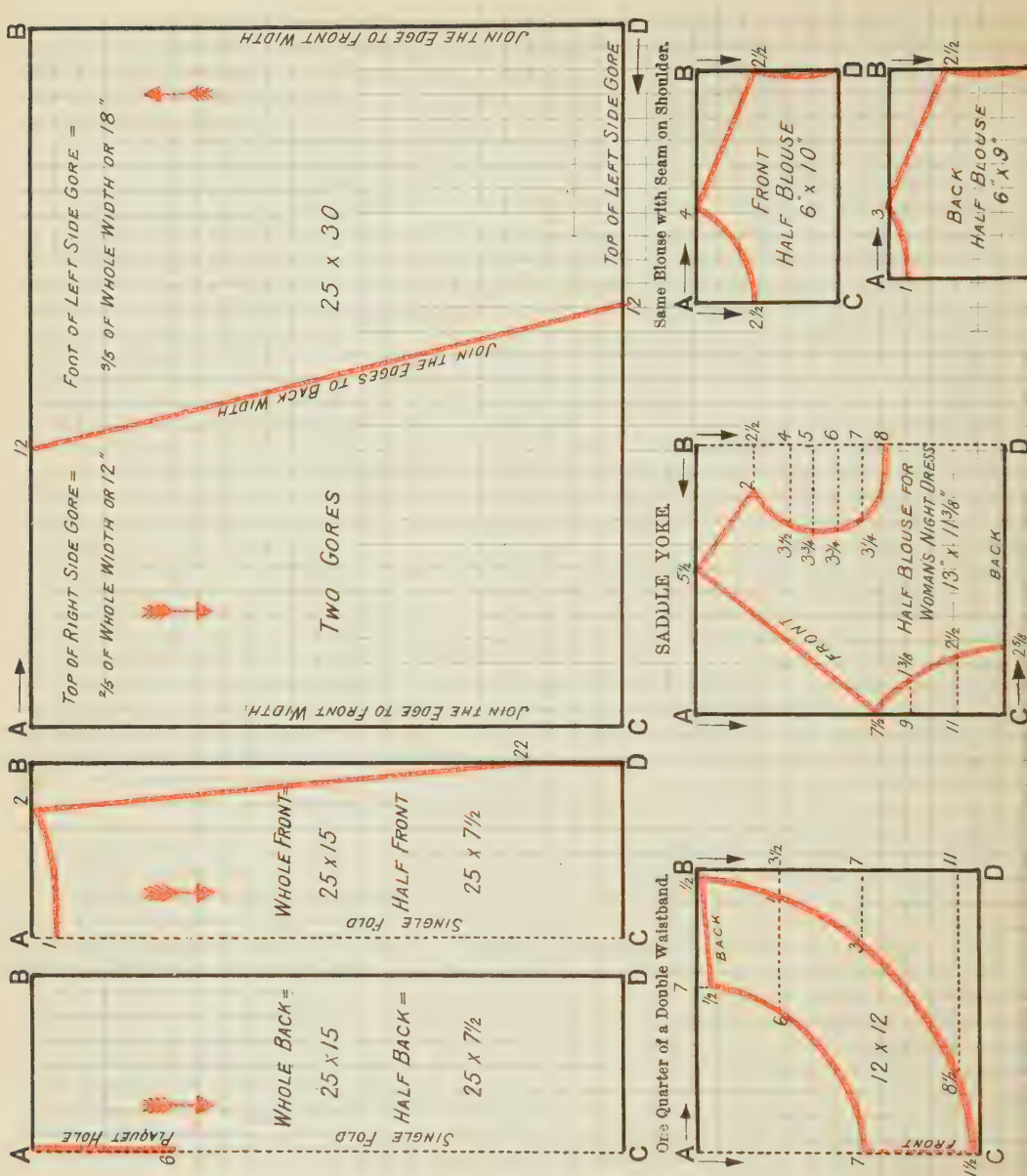




LOW-NECKED BODY FOR CHILD OF 2 YEARS. No. III.

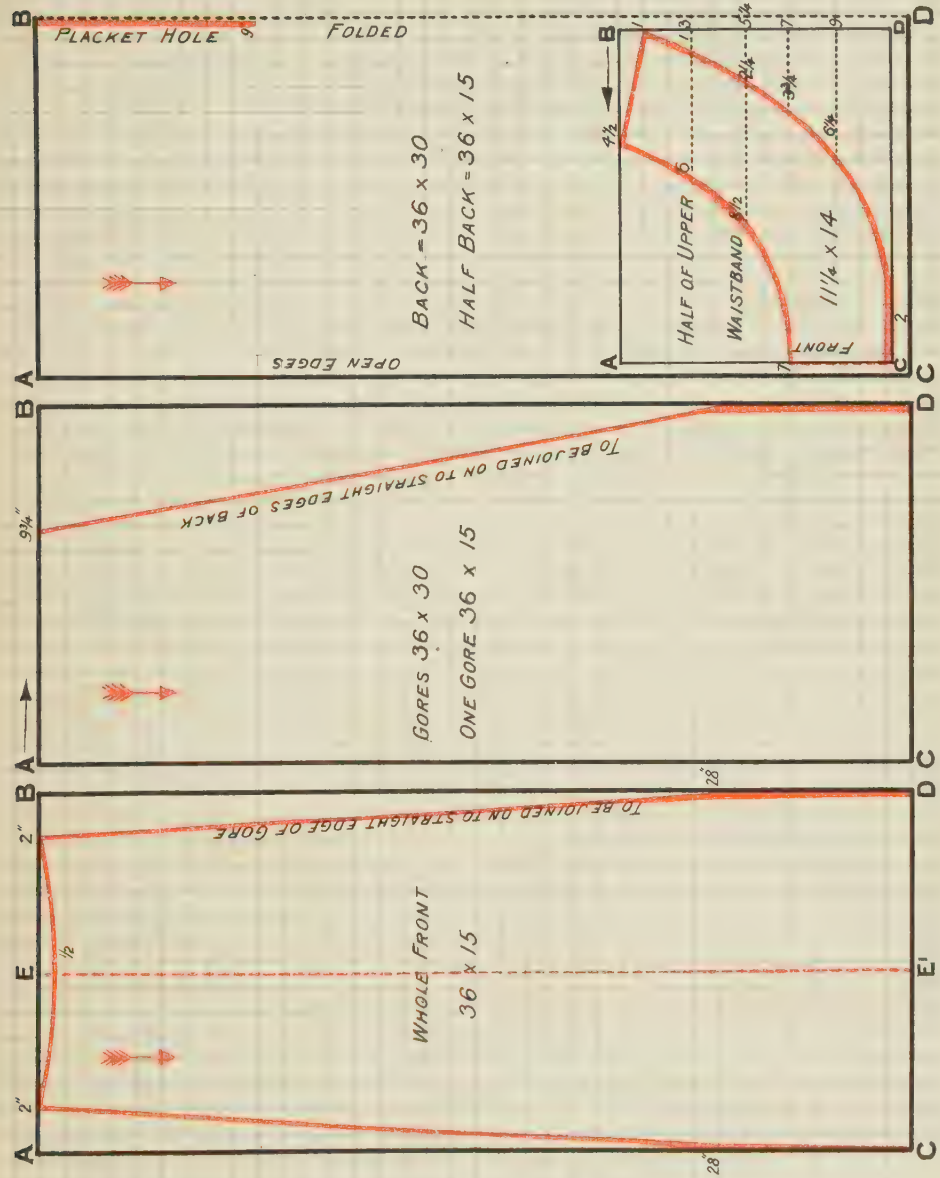
Neck-band, 29" × 2".
Waistband, 21" × 3".
Sleeve-bands, 9" × 2".

Note.—The Tucks on the Front are ⅛ inch wide, those on the Back and Sleeves are only ¼ inch. If preferred the Bodice might be gathered.



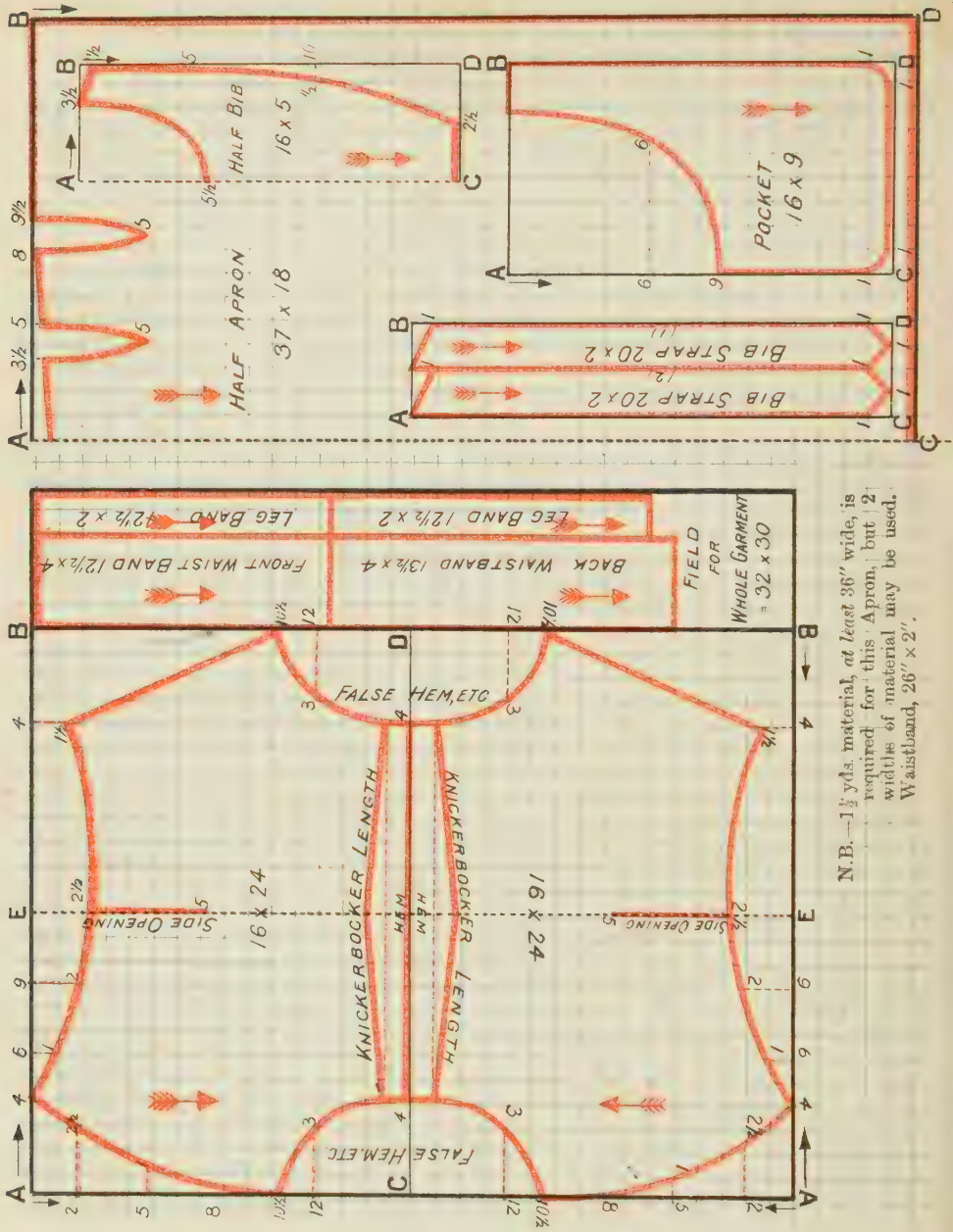
Note 1.—3 yds. of 30-inch wide material are required for two petticoats.
2.—When gored, two petticoats should be cut at one time, else, if the material be different on the right and wrong sides, the two gores would fit to one side.
3.—¼ yard of 36-inch wide material will be required for the four quarters of the band.

(1) 3 yds. of 30″ wide material will be required for one petticoat, but 5 yds. will cut out two.
(2) A deep hem is allowed for and one or more tucks according to the height of the wearer.


PLACKET HOLE
FOLDED
OPEN EDGES
BACK = 36 x 30
HALF BACK = 36 x 15
HALF OF UPPER WAISTBAND
11¼ x 14
FRONT
TO BE JOINED ON TO STRAIGHT EDGES OF BACK
GORES 36 x 30
ONE GORE 36 x 15
TO BE JOINED ON TO STRAIGHT EDGE OF GORE
WHOLE FRONT
36 x 15

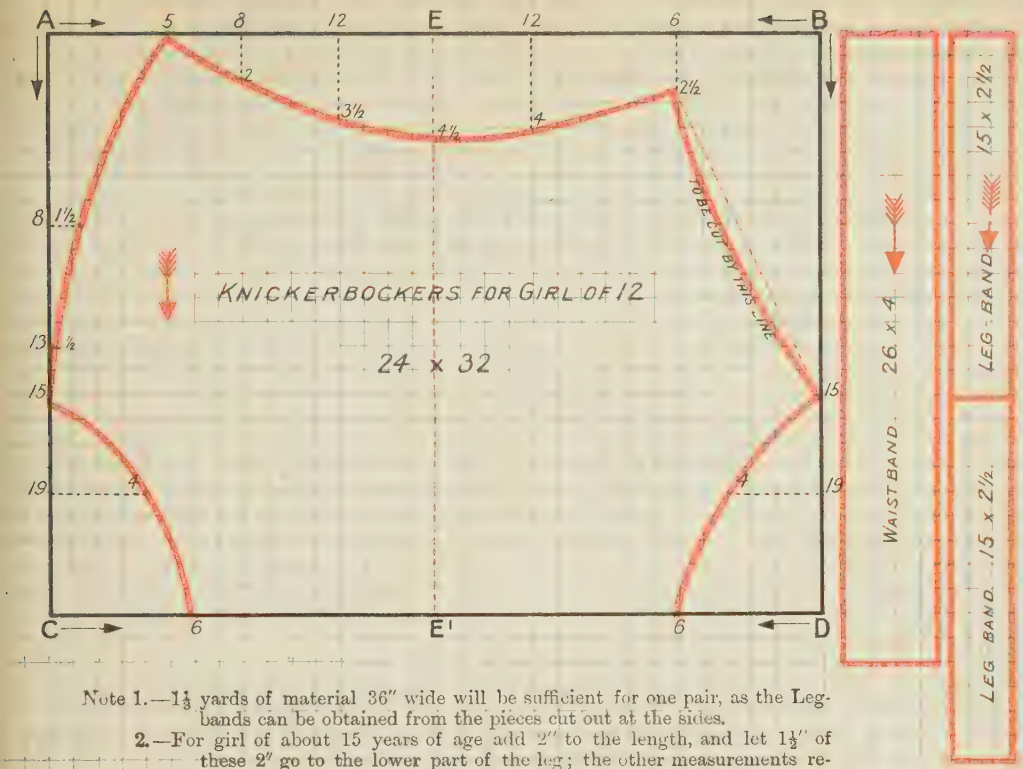
I. WOMAN'S COOKING APRON.

II. CHILD'S DRAWERS. 5 TO 6 YEARS OF AGE.



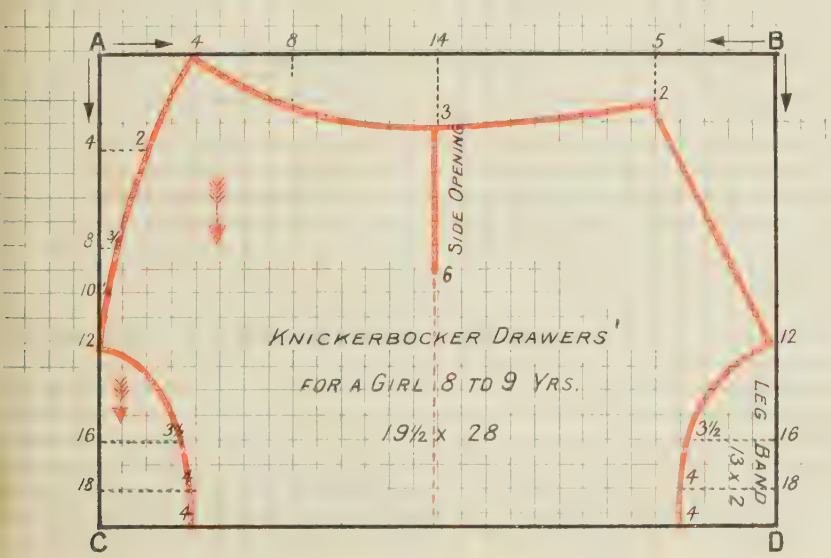
N.B.—1½ yds. material, *at least* 36" wide, is required for this Apron, but 2 widths of material may be used. Waistband, 26" × 2".

N.B.—If made as Knickerbockers the slant at the foot prevents them from drooping at the sides, but they may be cut even across.

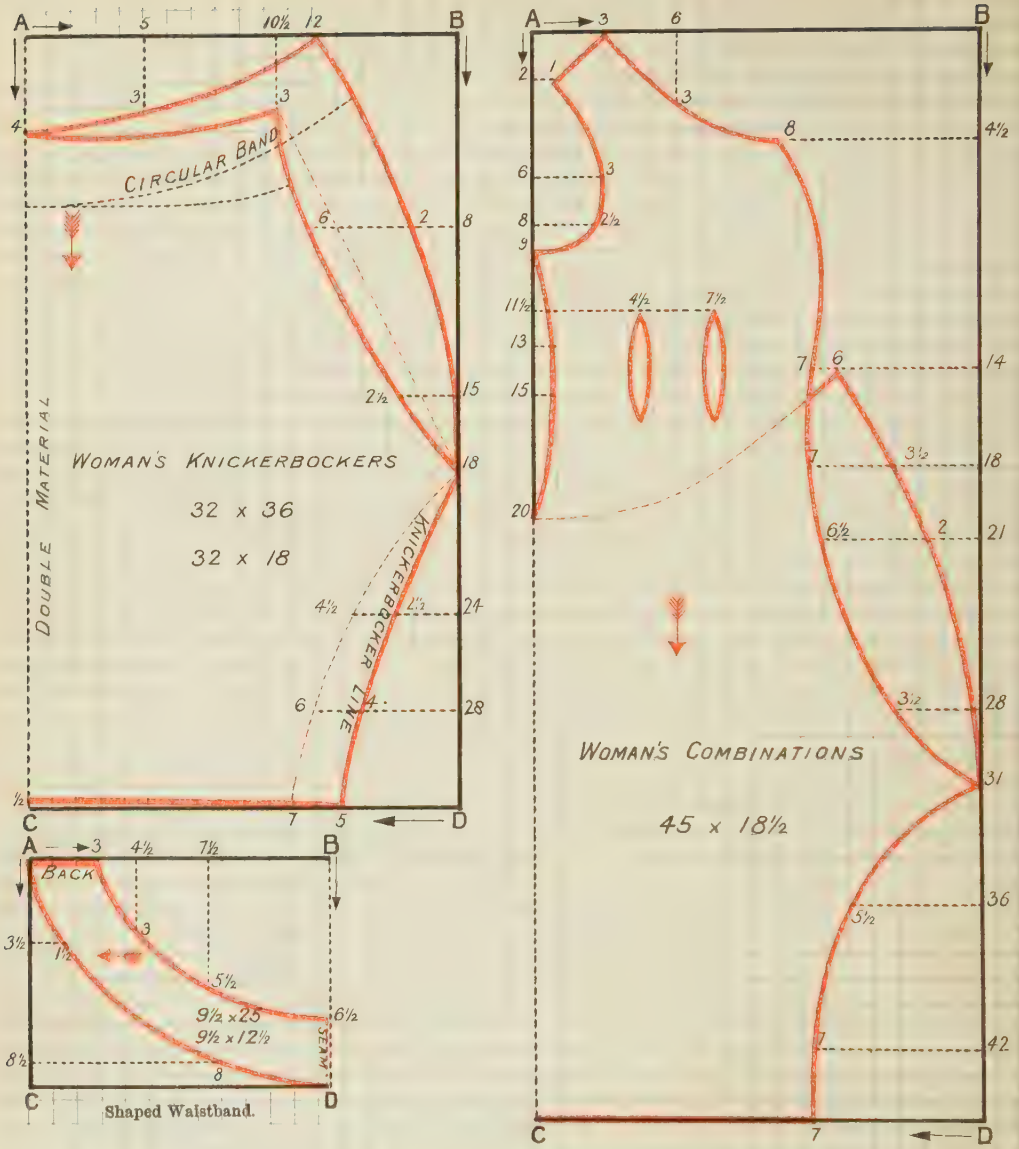


Note 1.—1⅛ yards of material 36″ wide will be sufficient for one pair, as the Leg-bands can be obtained from the pieces cut out at the sides.

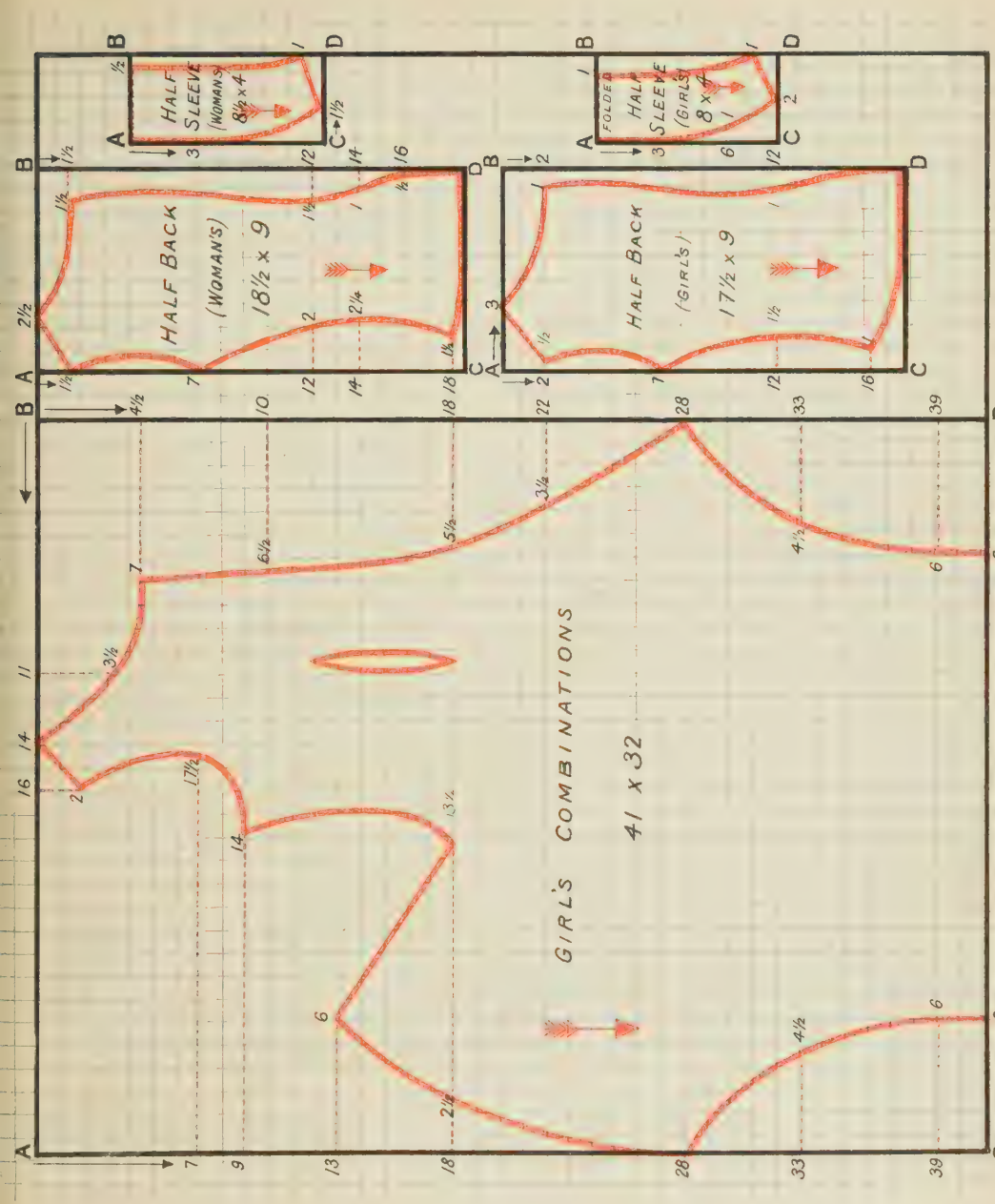
2.—For girl of about 15 years of age add 2″ to the length, and let 1½″ of these 2″ go to the lower part of the leg; the other measurements remain the same.

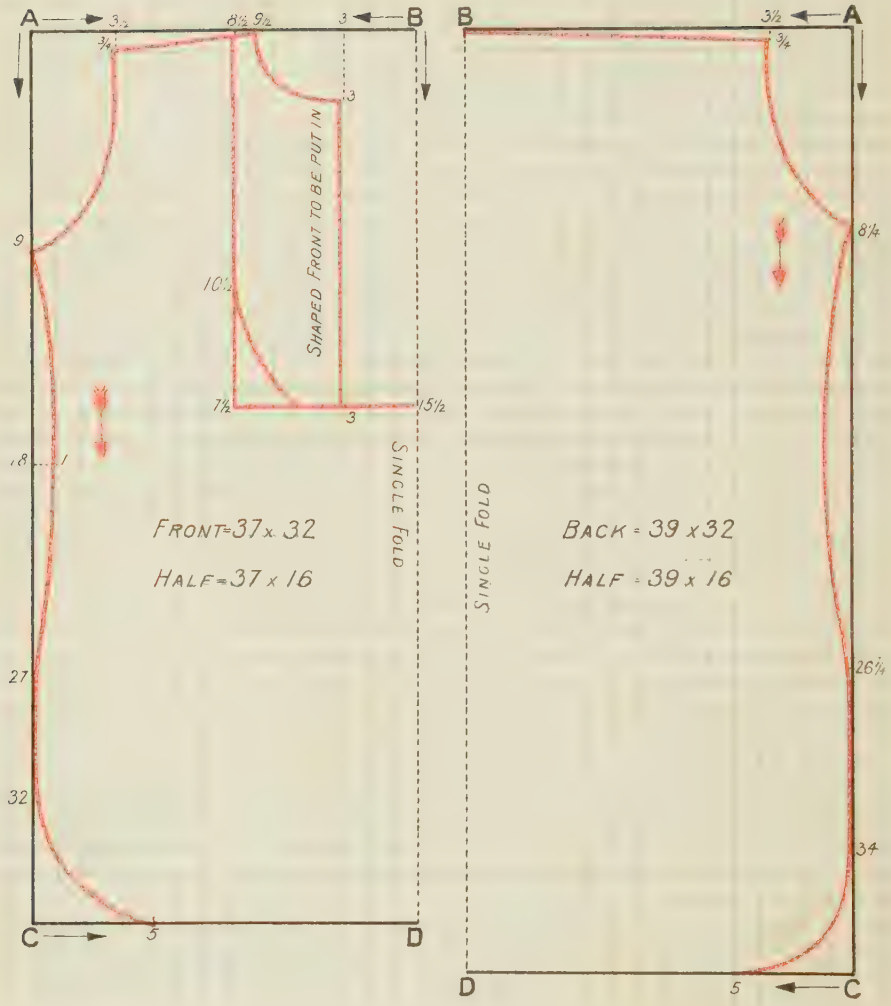


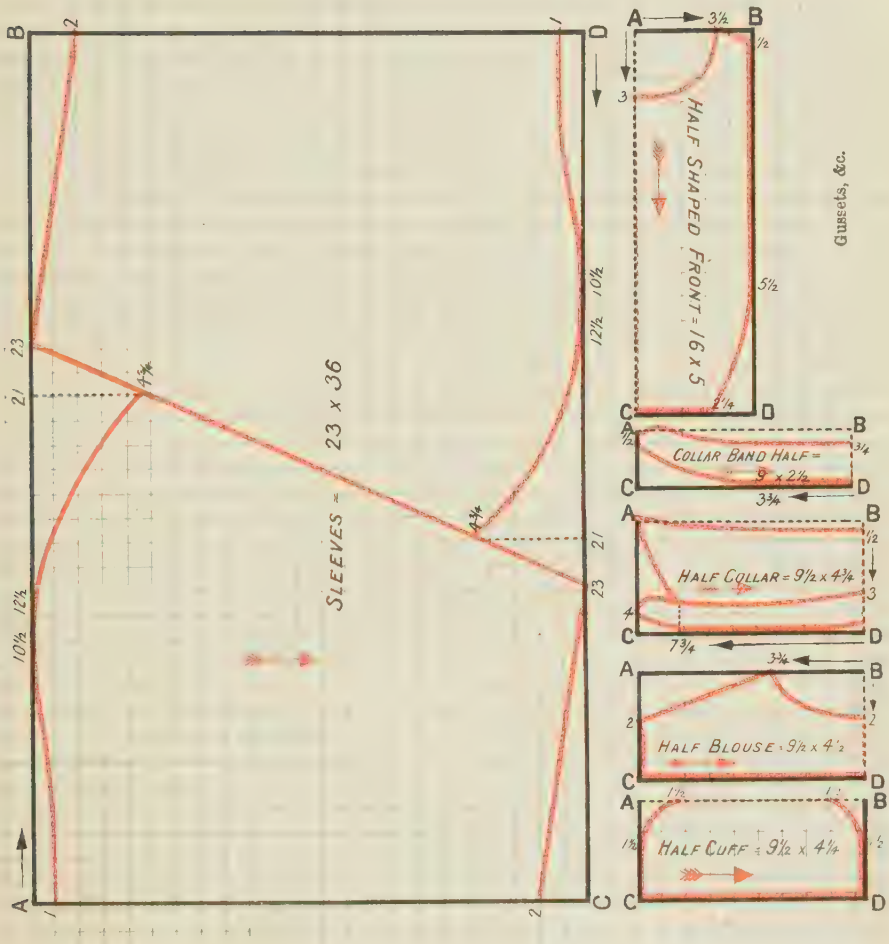
Note 1.—Front Waistband = 14″ × 4″.
2.—Back " = 15″ × 4″.
3.—Leg-bands " = 13″ × 2″.
For one pair of Knickerbockers 1¼ yds. 32″ wide is required.

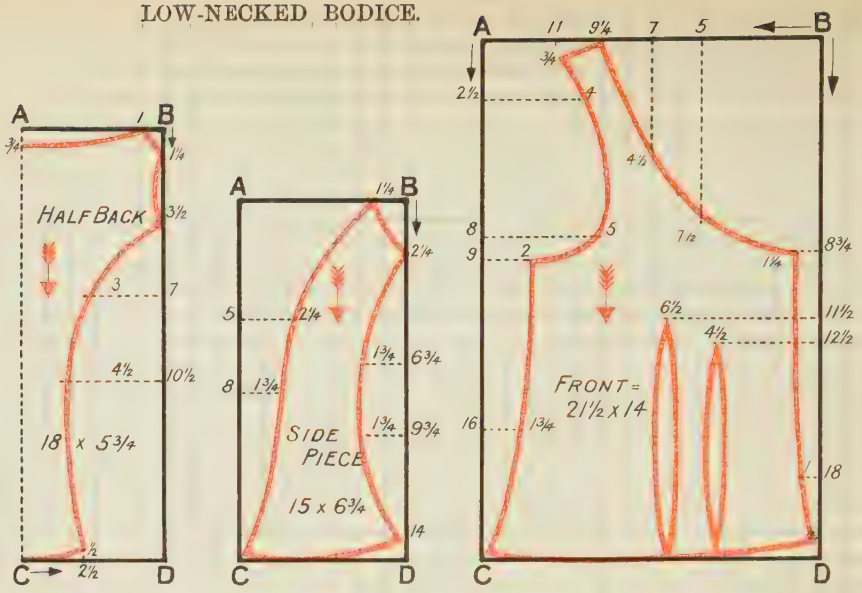


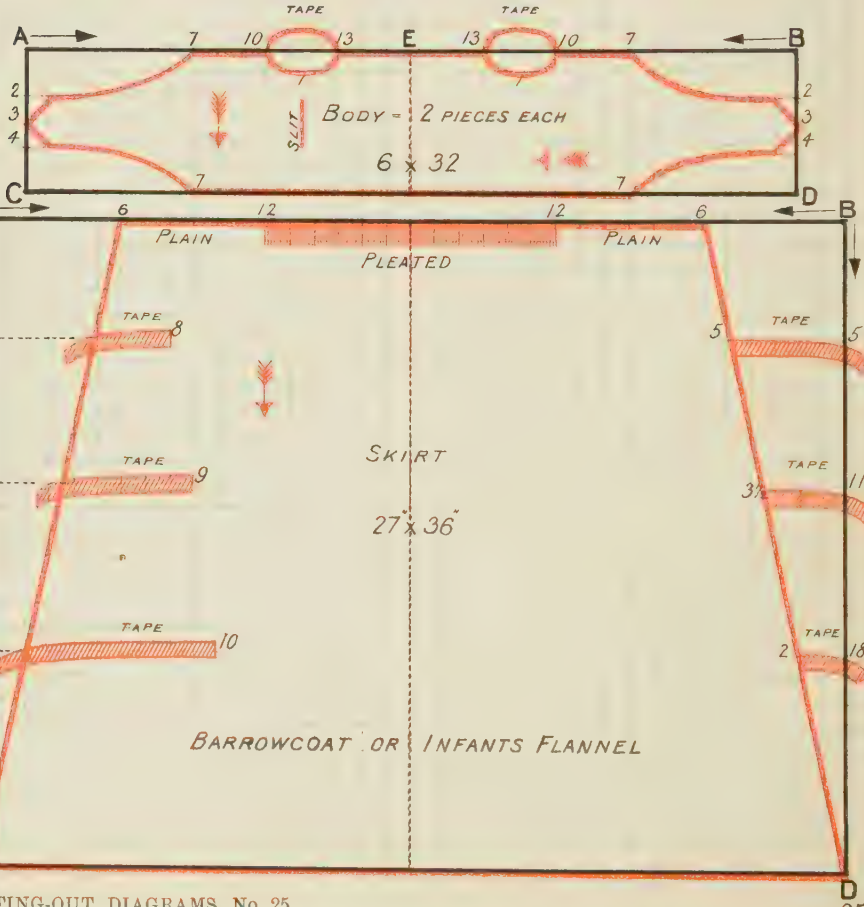
1. Plain Waistband = 26″ × 4″.
2. Leg-bands each 17″ × 2½″.
3. If not Knickerbockers, cut by the inner dotted line and allow from 2″ to 4″ more in length.
4. If a Circular Bind is used, lower the top curves by the depth of the Band.


GIRL'S COMBINATIONS
41 x 32
HALF BACK
(WOMAN'S)
18½ x 9
HALF BACK
(GIRL'S)
17½ x 9
HALF SLEEVE
(WOMAN'S)
8½ x 4
HALF SLEEVE
(GIRL'S)
8 x 4
FOLDED


A
B
C
D
3½
8½ 9½
3
¾
3
9
10½
7½
3
5½
SHAPED FRONT TO BE PUT IN
SINGLE FOLD
18
1
FRONT=37 x 32
HALF=37 x 16
27½
32
5
B
A
3½
¾
8¼
SINGLE FOLD
BACK = 39 x 32
HALF = 39 x 16
26¼
34
5

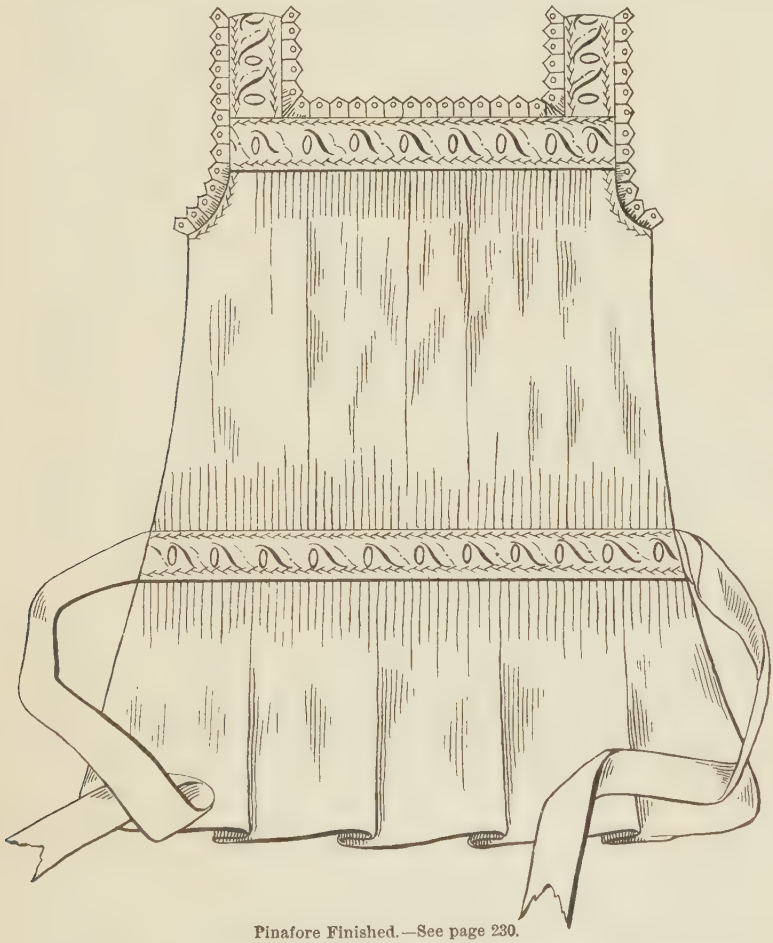

SLEEVES = 23 x 36
HALF SHAPED FRONT = 16 x 5
Gussets, &c.
COLLAR BAND HALF = 8 x 2½
HALF COLLAR = 9½ x 4¼
HALF BLOUSE = 9½ x 4½
HALF CUFF = 9½ x 4¼


HALF BACK
18 x 5¾
SIDE PIECE
15 x 6¾
FRONT = 21½ x 14


TAPE
TAPE
BODY = 2 PIECES EACH
6 x 32
SLIT
PLAIN
PLEATED
PLAIN
SKIRT
27 x 36
BARROWCOAT OR INFANTS FLANNEL

DIRECTIONS FOR MAKING UP PINAFORE WITH SHOULDER STRAPS.

I. *Seams.*—Take the two raw edges of each seam, lay them double as for a



Pinafore Finished.—See page 230.

hem $\frac{1}{6}$ inch wide, and hem down or run and fell each seam, the seam to be $\frac{1}{6}$ inch wide.

II. *Hems.*—Lay a fold ¼ inch deep down the two edges of the back, and ½ inch along the foot, and hem neatly.

III. *Bands.*—Gather the top of the front of the pinafore, leaving 1½ inch plain on each side, and set into the front neckband, which, when finished, should be 8½ inches long by 1 inch in depth. If an embroidered insertion be used for the band, fold a hem and gather on it.

IV. Gather the two halves of the back in the same way, and set into two bands, each 4½ inches by 1 inch when finished. Attach two buttons to the left-hand band, and two small loops to the right one.

V. *Waistband.*—Gather the front in two rows at the dotted lines, and hem on a waistband 14 inches by 1¼ inch. If desired, the waistband may be omitted.

VI. *Sashes.*—Hem the sashes and attach them to each end of this band.

VII. *Shoulder Straps.*—Seam up the two shoulder straps; fold so that the seam will fall to the middle of the inner side, and attach them to the front and back of the armholes by hemming them on securely to the wrong side of the band, or make the straps of insertion, feather-stitched at each side.

VIII. *Ornamentation.*—Ornament the bands with feather-stitching, or, if preferred, make the bands of embroidery insertion, and finish the neck and armholes (after the latter have been neatly hemmed) by Valenciennes lace, Torchon lace, or embroidery.

Materials.	Width.	Quantity.	Price per Yard.
Muslin, ...	32 inches.	1⅛ yards.	10*d.* to 1*s.* 6*d.*
Holland, ...	„	„	8*d.* to 10*d.*
Print, ...	„	„	6*d.* to 8*d.*
Sateen, ...	„	„	7*d.* to 9*d.*
Embroidered insertion, ...	1 inch.	30 inches.	7*d.* to 1*s.* 6*d.*
Lace, &c., ...	½ to ¾ inch.	2 yards.	6*d.* to 8*d.*

DIRECTIONS FOR MAKING UP A WOMAN'S CHEMISE

I. *Binders.* The body and sleeves are in one piece, therefore if binders are to be used they must be shaped to agree with the neck and armhole slopes, and either hemmed on the wrong side, or stitched on the right side.

II. *Side Seams.* These should be neatly finished with a sew-and-fell seam

about $\frac{1}{8}$ inch broad. If of muslin or fine calico, a run-and-fell seam might be substituted for the sew-and-fell one, or a counter-hem, stitched by the machine or hemmed by the hand, may be used to suit the materials of which chemises are made. The seam is left straight for about 2 inches at the foot to allow the hem to lie perfectly flat.

III. *Foot-hem.*—These vary in width according to the size of the chemise, from $\frac{3}{8}$ inch to a whole inch. Fold in this case about $\frac{3}{4}$ inch in depth, and neatly hem it.

IV. *Sleeves.*—The sleeves should be finished by a crossway band about $\frac{7}{8}$ inch wide, stitched securely on the wrong side, turned over to the right side, folded so as to be $\frac{5}{8}$ inch deep, and ornamented with two rows of stitching or feather-stitching. If preferred, the crossway band may be made to fall to the wrong side, or a narrow hem may be taken off from the sleeve itself, or if trimmed with embroidery, the embroidery may be put on so as to form a hem.

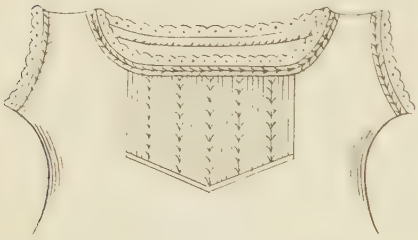
V. *Front Opening.*—The chemise may be made with or without a front opening. If it have a front opening let it be about 5 inches deep, and the front pleat or fold be $\frac{3}{4}$ inch broad when finished.

VI. Finish the left-hand side of the opening by a hem about $\frac{3}{8}$ inch wide at the top, and $\frac{1}{8}$ inch at the foot, or if preferred, put on a false hem $\frac{3}{8}$ inch wide when finished. For the right-hand side of the opening, stitch a fold 2 inches wide on the wrong side about $\frac{1}{8}$ inch from the edge, turn it over to the right side, and fold it so that the pleat will overlap the left-hand side by about $\frac{3}{8}$ inch, and be $\frac{3}{4}$ inch wide when finished. Wrap the upper pleat or fold over the under hem, and stitch it across the foot on the right side to strengthen it.

VII. *Neckband.*—Gather the front and back of the chemise for about 6 inches on each side of the centre; stroke the gatherings, and set them neatly into the neckband. If preferred, the front may be finished by tucks run by the hand or stitched by the machine. The neckband should be from 36 inches to 39 inches long, and from $\frac{3}{4}$ inch to 1 inch in depth. More of the neckband must be put to the front of the garment than to the back. For a full-sized chemise *at least* one inch more should be allowed; thus with a band 37 inches long, 19 inches must go to the front and 18 inches to the back.

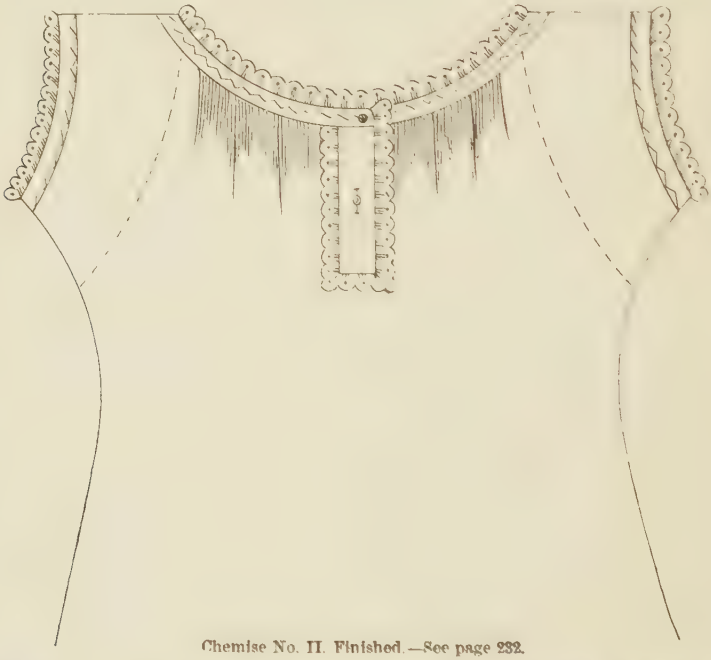
Trimming of the Neckband.—If trimmed with embroidery make the band in two parts, and insert the embroidery between the two. Or the embroidery

may be whipped up and attached to the band by seaming it on the wrong side. Lace, frilling, &c., must all be seamed on the wrong side of the band.



Garment Finished.—See page 231.

Chemise (new shape) Finished. See page 234.



Chemise No. II. Finished.—See page 232.

The lace and frilling must be put on full. Everlasting edging should be felled to the wrong side of the band, and the top of the band should then be stitched or feather-stitched to it.

VIII. *Button-holes.*—If the chemise have a front opening sew on a button either by a stitched circle or a star to the left side of the band, and neatly work a button-hole on the opposite end.

Materials.	Width.	Quantity.	Price per Yard.
Bleached calico, ...	36 inches.	2⅓ to 2½ yds.	6*d.* to 8*d.*
Unbleached calico, ...	36 „	„ „	4*d.* to 5*d.*
Nainsook or mull muslin, ...	40 „	„ „	8*d.* to 1*s.*
Flannelette, ...	36 „	„ „	4½*d.* to 9*d.*
Thread, &c., ...	...	...	1*d.*
Embroidery, ...	½ to ¾ inch.	2 to 2½ yds.	9*d.* to 2*s.*
Lace, ...	½ to ¾ inch.	3 to 3½ yds.	2*d.* to 8*d.*

DIRECTIONS FOR MAKING UP A BOY'S SHIRT.

I. *Seams.*—Join the sides by a sew-and-fell or run-and-fell seam $\frac{1}{6}$ inch wide, if of fine calico. If of Oxford shirting, it may be fixed for a counter-hem and stitched; if of flannel, it may have a counter-hem stitched or it may be run and back-stitched and herring-boned. The seam should never exceed ¼ inch in width.

II. *Foot-hem.*—Lay a fold $\frac{1}{6}$ inch deep along the foot of the back and front skirts, also along the side openings at the foot, and hem or stitch it neatly.

III. *Gussets.*—Insert a small gusset at the foot of each side seam to prevent tearing. A square of cloth 2½ inches to 3 inches will make two triangular gussets. Finish each by seaming one-half of each side of the triangle to the side openings, hemming down the rest of the gusset on to the wrong side of the shirt, and stitching it close to the edge of the base of the triangle.

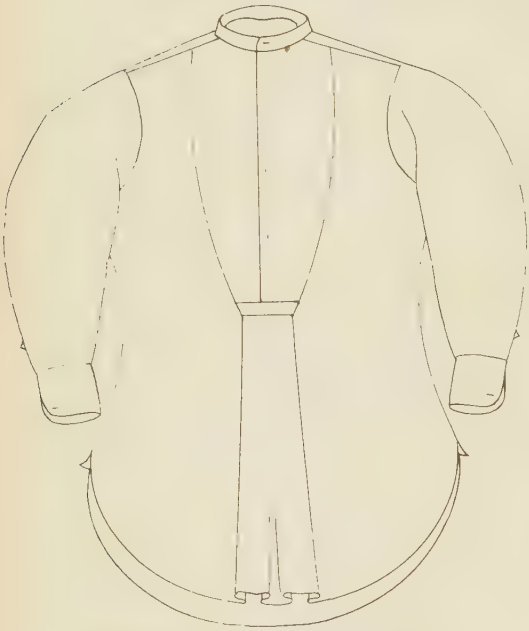
IV. *Binders.*—Stitch the sloping edges of the shoulder-linings, flatten the seams down, baste them neatly on to the wrong side of the shirt, and either hem them down on the wrong side, or stitch them on the right side where the dotted line round the shoulder is.

V. *Blouse or Yoke.*—Gather the back of the shirt at the top for about 6 inches on each side of the centre; set the gathers neatly into the centre of

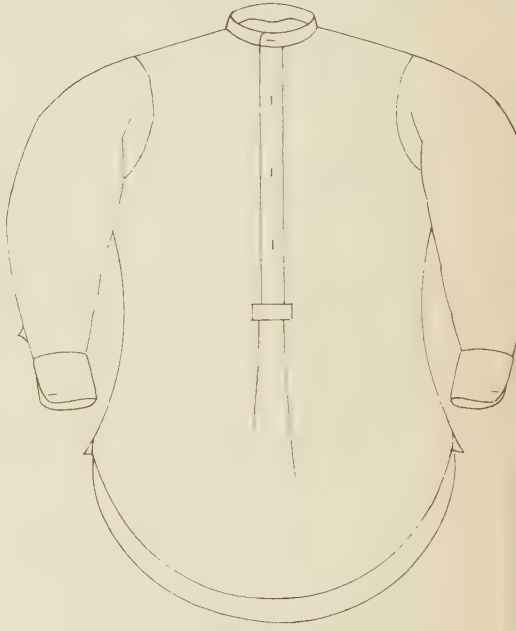
the blouse or yoke, and stitch on the plain parts of the blouse close to the edge. If of Oxford shirting or flannel, the fulness may be pleated in.

VI. Lay a fold on the inner blouse $\frac{1}{8}$ inch deep, and hem it neatly down on the inside of the upper blouse.

VII. Stitch the upper part of the blouse on to the front of the shirt at the



Shirt with Front Inserted.—See page 237.



Shirt with Front Fold.

shoulder, close to the edge, and hem down the inner blouse, so that it will lie flat and have no creases.

VIII. *Sleeves.*—Sew and fell the seams of the sleeves (the seam should correspond with the side seams); and leave an opening of at least 3 inches or about half the length of the wristband. This opening must be hemmed at both sides, and strengthened at the foot of the seam, either by a small gusset or by button-hole stitch.

IX. Stitch the rounded ends of the wristband on the wrong side, and stitch, chain-stitch or feather-stitch them neatly round $\frac{1}{4}$ inch from the edge on the right side.

Gather or pleat up the fulness of the sleeve, leaving 2 inches plain on each side of the wrist-opening, and either hem or stitch on the wristband. Neatly work a button-hole on one end of the wristband, and sew a button on the other end, exactly opposite, on the upper half of the sleeve.

X. Either stitch or hem in the sleeves, letting all the fulness go into the end of the blouse, and hem the shoulder-linings down on the wrong side. The cross material is the *under* half of the sleeve.

XI. *Front Opening.*—Fold a hem $\frac{1}{2}$ inch wide on the right side of the front opening. Turn back the cloth so as to make a fold on the left side at least 1 inch in width, and ornament it with two rows of stitching, chain-stitching or feather-stitching; or, if preferred, stitch on a shaped front, half on one side and half on the other. The front, collar, and wristbands will then be made of linen, two folds fine and the centre one coarse.

XII. The fulness in front must be pleated in at the foot of the front fold, and finished with a plain or shaped band.

XIII. *Collar.*—Stitch the collar round the top, $\frac{1}{6}$ inch from the edge, and either stitch or hem it neatly on to the shirt.

XIV. Work three button-holes on the front pleat on the left side of the shirt, and one at the left end of the collar. Sew four buttons on exactly opposite the button-holes. The button-holes on the fold should be bridged at both ends; the one on the collar should be rounded at one end.

XV. Mark the initials of the wearer at the foot of the front pleat.

Materials.	Width.	Quantity.	Price per Yard.
Oxford shirting, ...	36 inches.	$2\frac{1}{4}$ yards.	6*d.* to 8*d.*
Long cloth, ...	„	„	6*d.* to 8*d.*
Flannel, ...	„	„	1*s.* 4*d.* to 2*s.*
Flannelette, ...	„	„	$4\frac{1}{2}$*d.* to 9*d.*
Aberdeen wincey, ...	„	„	1*s.* 4*d.* to 1*s.* 10*d.*
Buttons, &c., ...	...	...	4*d.*

N.B.—$2\frac{2}{3}$ yards will be required if the material be only 30 inches wide.

DIRECTIONS FOR MAKING UP A WOMAN'S NIGHT-DRESS, WITH YOKED BACK AND TUCKED FRONT.

I. *Side Seams.*—The seams should be about $\frac{1}{8}$ or $\frac{1}{4}$ inch broad according to the kind of seam. They may be finished by a run-and-fell, sew-and-fell, or counter-hem seam, if of calico or muslin; if of flannel, they must be run and back-stitched as for the seams of a flannel petticoat, and herring-boned on the wrong side.

II. *Foot-hem.*—The fold round the foot will be from 1 inch to $1\frac{1}{2}$ inches in depth, and should be hemmed or stitched neatly.

III. *Shoulder Linings.*—These should be from $1\frac{1}{2}$ inches to 2 inches wide, shaped out to match the curves of the armholes, and the front binder will be longer than the back one, as there is no yoke on the front of this night-dress. When a saddle yoke is put on, the binders are the same in length. Join the raw edges at the foot by back-stitching them $\frac{1}{4}$ inch from each edge. Flatten these out and having folded down $\frac{1}{8}$ inch along the inner edges, hem them neatly on to the wrong side of the night-dress or stitch them on the right one. If no binders are used, finish the inside of the sleeve and strengthen the armhole by putting on linen or Indian tape at least $\frac{5}{8}$ inch wide, or a cross false hem.

IV. *Blouse or Yoke.*—Gather the top of the back skirt, leaving about 5 inches plain on each side of the armhole, and, having neatly stitched or feather-stitched the upper blouse $\frac{1}{4}$ inch from its straight selvedge side, hem it on. The part gathered should be twice the width of the part of the blouse to be attached to the gathers. Fix the inner blouse smoothly on to the outer one, and hem it also, just on a line with the setting-in stitches of the upper blouse. If binders are put on, the upper blouse must only be attached to the skirt at the armholes, while the inner blouse must be hemmed to the binders only.

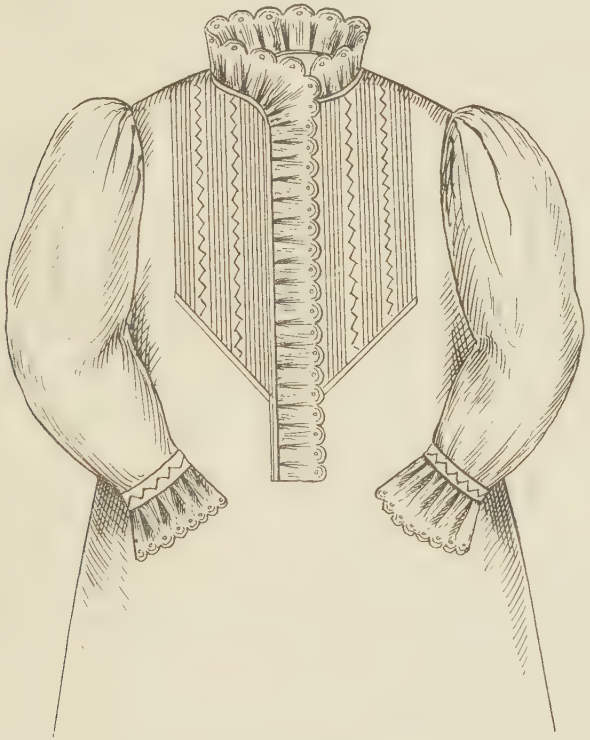
V. *Front.*—Tuck the space marked on each side of the front opening, and either run or stitch the tucks, which should be about $\frac{1}{8}$ inch wide. Fold them towards the front, and decrease them in length towards the armholes. Group them according to taste, and finish them at the foot either with a row of feather-stitching or a narrow feather-stitched hem $\frac{3}{8}$ inch wide.

The tucks may be arranged before or after the front is shaped. If more ornamentation be desired, the spaces between the groups of tucks may be feather-stitched and knotted, or rows of insertion let in.

VI. *Front Fold.*—Night-dresses should fold right over left, although some

prefer them to fold the opposite way. Put on a false hem ½ inch wide on the left side of the front opening, or fold down a hem ½ inch wide. But if a hem be used, the opening must not be made in the centre of the front skirt, but ⅝ inch extra must be taken off the right-hand side of it.

Neatly stitch the front fold or pleat on to the wrong side, turn it over and



Garment Finished.—See page 242.

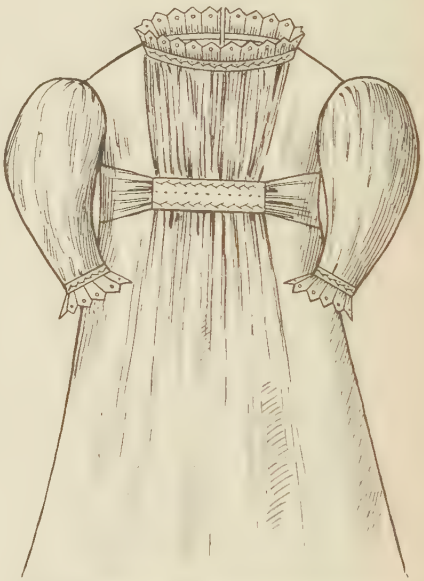
fold it so as to be 1½ inches wide; stitch it neatly, or, if preferred, feather-stitch it. Fold the top of the blouse on to the upper edge of the front, and either stitch it down or hem it. If hemmed, it may be ornamented with stitching or feather-stitching.

VII. *Collar.*—Curve out the neck to the required size, and, after having stitched or feather-stitched the collar, hem it on to both right and wrong

sides. The collar must be carried straight across the front fold and the corresponding hem on the left side, and then curved round towards the shoulders.

VIII. *Sleeves.*—Sew and fell the seams of the sleeves, leaving a wrist opening, if desired, of about 4 inches, which must be neatly hemmed and strengthened at the foot with a few embroidery or blanket stitches to prevent tearing. Gather, tuck, or pleat the fulness according to the material of which the sleeve is made. From 1½ inches to 2 inches should be left ungathered on each side of

Child's Night-dress with Yoke.—See page 238, No. II.



Child's Night-dress without Yoke.—See page 238.

the seam or opening, and the wristband must be put on in the same way as the collar was done. Insert the sleeves between the shoulder linings by hemming or stitching them in. The fulness should be set in, one half into the blouse and one half into the front.

IX. *Button-holes.*—Work three button-holes on the front fold and one on the collar, and sew on four buttons exactly opposite. Those on the front fold should be square at both ends, but the one on the collar is better to have a rounded end.

X. *Trimming.*—Ornament with lace, frilling, or Swiss or Madeira embroidery.

Mark the initials of the owner beneath the front pleat.

Materials.	Width.	Quantity.	Price per Yard.
Bleached calico, ...	36 inches.	4½ yards.	6*d.* to 8*d.*
Unbleached calico, ...	36 „	4½ „	5*d.*
Flannel, ...	38 „	4½ „	1*s.* 6*d.* to 2*s.*
Flannelette, ...	38 „	4½ „	4½*d.* to 9*d.*
Torchon lace, ...	¾ inch.	3¾ „	5*d.* to 8*d.*
Embroidery edging, ...	½ to 1 inch.	2½ „	9*d.*, 1*s.* 6*d.*, 2*s.* 6*d.*
Buttons, sundries, ...	...	...	1*d.* to 4*d.*

DIRECTIONS FOR MAKING UP A PAIR OF DRAWERS FOR A CHILD OF FIVE YEARS.

I. If Opened at Back.

1. *Seams.*—Join the two sides of each leg by a sew-and-fell seam ⅛ inch deep, and take care in doing so to make the two halves for the right and left legs respectively.

2. Lay a hem ¼ inch in depth along the two sides of the upper part of the legs, and hem each neatly.

3. Join the two front edges at the top by a seam 2 inches long.

4. Finish the foot of each leg by a hem ¾ inch in depth, and hem it neatly.

5. Ornament with two tucks ¼ inch in depth, with ¼ inch between.

6. *Legbands.*—If knickerbockers, the foot of the leg must be cut by the slanting dotted line. Each must then be gathered, stroked, and sewed into the band 12 inches by 2 inches, that is 12 inches by 1 inch when finished. The footband may be ornamented by two rows of stitching ¼ inch from the edge, or by feather-stitching.

7. *Waistbands.*—The fulness at the top must be gathered (leaving 5 inches plain on each side of the seam), and set into the waistband.

8. The waistband should be from 22 to 24 inches wide, and 2 inches in depth when finished.

9. Seam up the ends of the waistband, ornament with a row of stitching about ¼ inch from the edge, and hem neatly on to the drawers on both right and wrong sides. If preferred, the stitching may be omitted.

10. Sew on a button by a stitched circle or star to one end of the waistband, and work a button-hole directly opposite; or, if strings be preferred, attach them neatly and hem the ends.

11. Mark the initials of the child on the waistband.

Garment Opened at Side.
See page 246.

II. If Opened at Side.

1. Sew and fell back to back and front to front of each leg.

2. Finish the foot of each leg as above.

3. *Side Openings.*—Make a slit about 5 inches in depth on the side of each leg as in diagram. Finish by putting on a false hem ($\frac{5}{8}$ inch broad when finished) to the back edge of each slit, and a double fold ($\frac{1}{2}$ inch broad when finished) on the front edge. Overlap the front fold with the back one, and finish by two rows of stitching to keep it in its place, *or* fold a narrow hem $\frac{1}{6}$ inch wide along each side of the opening, and strengthen at the foot by a gusset or strengthening tape.

4. *Waistbands.*—Take a piece of cloth selvedge way, $13\frac{1}{2}$ inches by 4 inches, for the back waistband. Double it in two, sew up the edges, ornament with a row of stitching, and set on to the back of the drawers which should have been gathered on each side of the seam, except 3 inches towards each side.

5. Finish the front in the same way (only the gathers may be more towards the side openings), and the band should be $12\frac{1}{2}$ inches by 4 inches, or $12\frac{1}{2}$ inches by 2 inches when finished.

6. Work two button-holes, one at each side of the back waistband, and three on the front waistband, one at each end, and one in the middle.

7. Ornament with Torchon lace, embroidery, or everlasting edging.

Materials.	Width.	Quantity.	Price per Yard.
Unbleached calico, ...	32 inches.	$\frac{7}{8}$ to 1 yard.	$4\frac{1}{2}d.$ to $5d.$
Bleached calico, ...	32 „	„ „	$6d.$ to $8d.$
Flannel, ...	27 „	1 yard.	$1s.$ $4d.$ to $1s.$ $8d.$
Turkey-red cotton for bands,	32 „	$\frac{1}{4}$ „	$8d.$ to $10d.$
Flannelette, ...	32 „	$\frac{7}{8}$ to 1 yard.	$4\frac{1}{2}d.$ to $9d.$
Thread and buttons, ...	...	...	$1\frac{1}{2}d.$
Lace or everlasting edging, ...	$\frac{1}{4}$ inch.	$\frac{3}{4}$ to $1\frac{1}{2}$ yards.	$4d.$ to $6d.$
Embroidery, ...	$\frac{3}{4}$ to 1 inch.	1 yard.	$7d.$ to $2s.$

HOW TO MAKE UP A PETTICOAT WITH A BODICE.

THE BODICE.

Children's petticoats are more comfortable when attached to a bodice.

I. Have the front and two half backs of the bodice cut out as in the diagram. Add 1 inch to the length to allow for the foot-hem. See Direction VII.

II. The bodice may be either single or double, and should be made of strong twilled or Dacca twist calico—$\frac{1}{3}$ yard, 30 inches wide, will be sufficient.

III. Join the side seams by folding them as for a counter-hem, and finish with two rows of hemming; or, if made by machine, with two rows of stitching.

IV. Fold a hem about $\frac{3}{4}$ inch deep down the two sides of the back, and finish each by hemming or stitching.

V. Finish the neck and armholes by a hem $\frac{1}{4}$ inch deep, or by a false hem on the cross, either hemmed or stitched.

VI. For *Shoulder Straps* two pieces of calico, each 5 inches by $2\frac{1}{2}$ inches, will be required. Stitch the two raw edges selvedge way, $\frac{1}{8}$ inch from the edge. Turn them over so that the seam will be right in the middle of the under half of the strap, and attach one end of each to the front, and the other to the back of the armhole, as if the strap were a piece of tape. Broad Indian or linen tape might be used instead of straps.

VII. Fold a hem 1 inch in depth round the foot of the bodice, and hem neatly. This hem is to be cut along the fold so as to form a waistband, into which the flannel skirt is to be inserted. If preferred, a false hem of straight material may be used.

THE SKIRT.

I. For the skirt two widths of flannel about 24 inches wide, and 14 inches or 15 inches long will be required. If 36 inches wide flannel be used it would be more economical to buy material for two petticoats, as, by joining the back width of one petticoat up the middle, $1\frac{1}{6}$ yards would be sufficient. Mark the right side of the flannel by a pin, and notice to make the nap fall *downwards* from the waist to the foot-hem.

II. *Seams.*—Having turned the two breadths on to the wrong side, join the seams in either of the two following ways. (See Lesson on Flannel Seams.)

(*a*) Place the two edges of the flannel together, and back-stitch and run

them about $\frac{1}{4}$ inch from the edge. Flatten the two edges out, and herring-bone each raw edge down neatly.

Or (*b*) Place the two edges together, so that one shall overlap the other by $\frac{1}{6}$ inch. Run the two together $\frac{3}{8}$ inch from the edge which overlaps. Fold and herring-bone the two edges down with one row of herring-boning.

III. *Foot-hem.*—Fold a hem along the bottom of the petticoat, $1\frac{1}{2}$ inches or 2 inches in depth, and herring-bone or hem it neatly round the wrong side with cotton, No. 30.

IV. *Tucks.*—Measure 5 inches from the foot, and fold a tuck $1\frac{1}{4}$ inches in depth. Run it neatly with mending yarn or Berlin fingering wool. Both the hem and tuck may be finished on the right side, if thought necessary, by feather-stitching in flax or silk thread.

V. *Back-opening or Placket-hole.*—Make a placket (see Lesson on Placket-hole) about 4 inches deep in the middle of the back breadth. On right-hand side, *when the wrong side of the garment is uppermost*, turn down a fold $\frac{1}{4}$ inch deep and herring-bone it. On the left-hand side lay a fold $\frac{5}{8}$ inch broad, and herring-bone it also. Turn the garment to the right side, fold the broad hem over the narrow one, and fasten it securely at the foot by two rows of stitching, and strengthen on the wrong side by a few embroidery stitches or a straight strengthening tape.

VI. *Insertion of Skirt into Band or Bodice.*—Pleat up the extra fulness of the skirt, making the pleats about $\frac{3}{4}$ inch broad, and folding them backwards towards the placket-hole.

VII. Cut up the hem at the foot of the bodice, and, having folded down the two edges for about $\frac{1}{6}$ inch, insert the top of the flannel skirt between the folds of the hem. Be careful to place the centre of the skirt to the centre of the bodice, and the edges of the back of the bodice to the edges of the placket-hole. Hem both sides firmly down.

N.B.—A straight waistband 24 inches by $2\frac{1}{2}$ inches when finished might be used, but is not so suitable as a bodice for a child of this age.

For *older girls*, straight bands from 25 to 28 inches long and $2\frac{1}{2}$ deep

when finished may be used. The skirt is generally made of two breadths of flannel, from 27 to 30 inches wide; the breadths being left perfectly straight. If narrower flannel be used, three widths may be necessary, and in this case the front width is often sloped a little at the sides.

The length of the skirt depends to some extent on the length of the dress worn by the girl, but the rule generally given is, that up to nine years of age the foot of the petticoat reaches just above the knee; up to twelve years it cuts the knee; up to fourteen years it comes immediately beneath the knee; and after that the petticoat assumes the dimensions of a woman's one. Allowance must in each case be made for a deep hem, and, if preferred, one or more tucks. It is essential that when pleating up the skirt for the waist-band very little fulness be put *into the front* of the petticoat; the greater part of it should fall towards the back.

DIRECTIONS FOR MAKING UP A CHILD'S OVERALL.

I. *Seams.*—Run and fell, sew and fell, counter-hem, sew or stitch the seams according to the material of which the overall is made. If a run-and-fell or sew-and-fell seam be used, it should be about $\frac{1}{8}$ inch wide. For very thin material a mantua-maker's seam might be used.

II. *Foot-hem.*—The bottom hem should be from 2 to $2\frac{1}{2}$ inches deep, and it may be hemmed, stitched, hem-stitched, or feather-stitched according to taste.

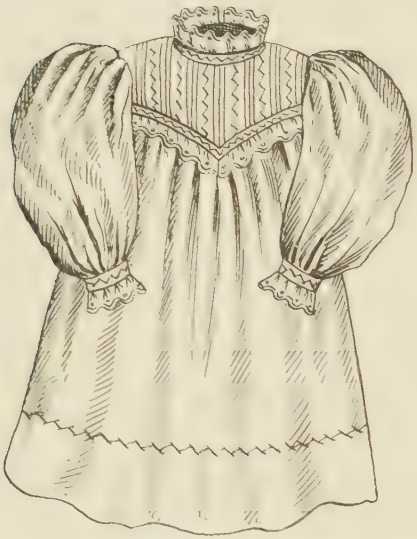
III. *Tucks.*—Three tucks, each $\frac{1}{2}$ inch wide, or a deep one $1\frac{1}{2}$ inches wide, may be placed above the foot-hem, and these may be run or hem-stitched according to taste. If the overall be made of gingham, serge, or other stuff materials, three rows of narrow braid might be run or stitched on instead of tucks.

IV. *Back-opening or Placket-hole.*—This opening should be from 6 to 9 inches long. It may have a narrow hem all round and be strengthened at the foot with a strengthening tape, or the left side may be finished by a hem $\frac{1}{8}$ inch wide, and the right side by a broader one, $\frac{1}{2}$ to $\frac{3}{4}$ inch wide. The broad one must be lapped over the narrow one, and secured at the foot by two rows of stitching $\frac{1}{8}$ inch apart and a strengthening tape on wrong side.

V. *Sleeves.*—Join the upper and under sides by a seam corresponding to those on the skirt. Gather the wrists into a band where the dotted lines on

the diagram occur, so as to leave a frill beneath, or cut off the sleeve by the lower dotted line and insert into a plain band, or if the sleeve be a coat one a cuff with three rows of braid might be substituted. If a short sleeve be preferred it might be made of a shaped frill, about 4 inches deep on the shoulder and 1 inch underneath the arm where the skirt seams are.

VI. *Yoke or Blouse.*—The yoke or blouse may be either single or double. If the pinafore be a muslin one it might be made of strips of insertion. The yoke might be finished by piping it all round, or by feather-stitching it $\frac{3}{8}$ inch from the edge.



Overall Finished.—See page 163

VII. *Attachment of Skirt to Blouse.*—The skirt may be gathered or pleated up to fit the blouse, and then, having been inserted between the upper and inner blouses, neatly hemmed on both sides. Or if the blouse were finished with a piping the skirt could be whipped up and sewed to it.

The sleeves may be attached to the blouse in the same manner, or if the blouse be a single one, the edges of the sleeve and the overall might be run together on the right side, and then back-stitched on the wrong side $\frac{1}{4}$ inch from the running by what is called a bodice or French seam. By this means no raw edges are seen on either side.

VIII. *Ornamentation.*—A deep frill of the material braided, or one edged with lace or embroidery may be put all round the neck. Or the neck may be finished with a narrow edging of embroidery or lace, and a deep frill of the same be carried round the bottom edge of the yoke, on both front and back as well as over the top of the sleeves. The wrists should be finished to match the blouse.

IX. *Fastenings.*—A tape may be drawn through a runner at the neck, or two button-holes may be worked on the right-hand side of the blouse, and two buttons be sewed on to the left-hand side directly opposite.

Materials.	Width.	Quantity.	Price per Yard.
Nainsook or zephyr,.....	36 inches.	3 yards.	8*d.* to 1*s.*
Cambric,.....	„	„	1*s.* 6*d.* to 2*s.*
Print, ...	30 to 36 inches.	3 to 4 yards.	6*d.* to 9*d.*
Gingham,.....	„ „ „	„ „	10*d.* to 1*s.* 3*d.*
Holland,.....	„ „ „	„ „	8*d.* to 1*s.*
Serge, llama or fancy twill flannel,.....	36 inches.	3 yards.	1*s.* to 2*s.* 6*d.*

MANTUA-MAKER'S SEAM.

As a mantua-maker's seam requires only one set of stitches it is a very useful and quick method of joining materials for under-skirts, pinafores, bags, &c.

I. Mark the right and wrong sides of the material with a pin.

II. Place the two pieces of the material together so that the top raw edge

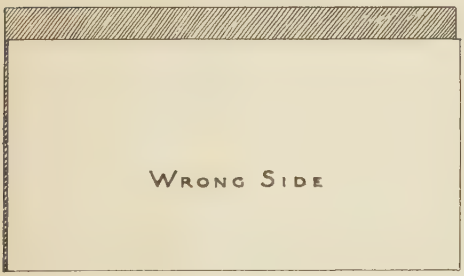


Fig. 1.

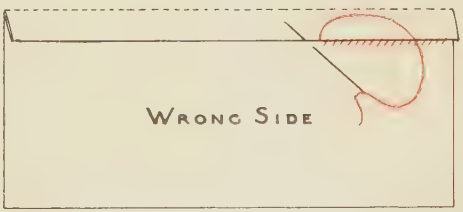


Fig. 2.

of the *upper* piece shall be $\frac{1}{6}$ inch below that of the *under* piece, and the *right* sides of both pieces lie to the *inside*, as in Fig. 1.

III. Turn down the upper edge (or part shaded in Fig. 1) over the lower one *twice*, as for a hem. See Fig. 2.

IV. Hem through all the folds or thicknesses, taking care to let the stitches show clearly on the other side.

V. When finished the *wrong* side will show a folded ridge as in Fig. 3, and the *right* side, *if stretched apart*, will appear as in Fig. 4.

Fig. 3.—Wrong Side.

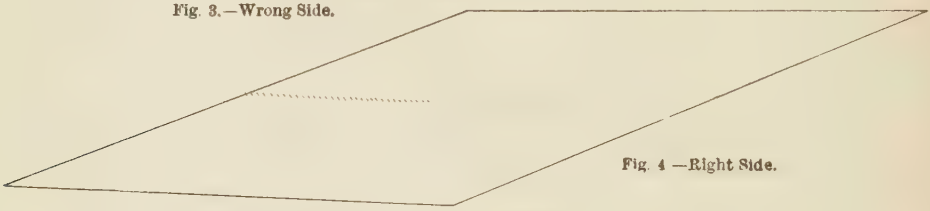


Fig. 4.—Right Side.

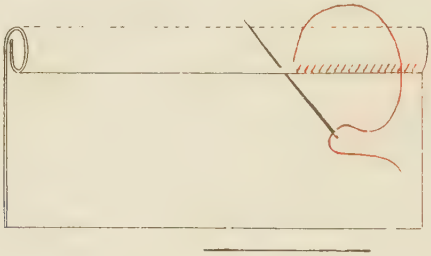


Fig. 5.
Mantua-maker's Seam:
Second Method.

COUNTER-HEM SEAM.

Counter-hemming is used for joining both straight and curved seams, especially if the articles seamed are to be machine-stitched. It is a perfectly flat seam, and consists of two sets of hemming stitches worked on the right and wrong sides, or, if preferred, it may be finished with two rows of stitching on the right side. It is used for pinafores, shirts, &c.

I. Turn down the raw edges of the two pieces of material for about $\frac{1}{6}$ inch, one on the *right* side and one on the *wrong* side as in Fig. 1.

II. Lay the *fold* of I., represented by the dotted line, above the *raw edge* of II., also represented by a dotted line as in Fig. 2.

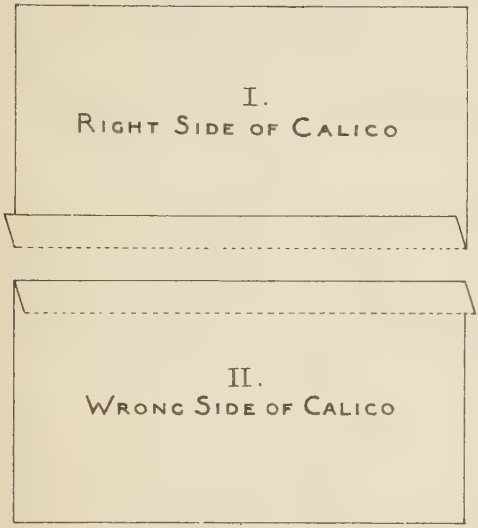


Fig 1

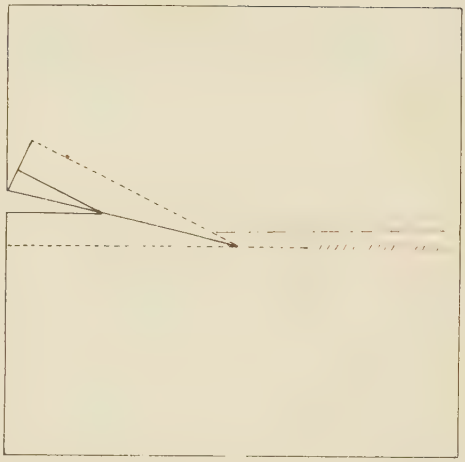


Fig. 2.

III. Hem down first one side and then the other, so that when finished the specimen may appear as in Fig. 3. If stitched it would appear as in Fig. 4.

Fig. 3.

Fig. 4.

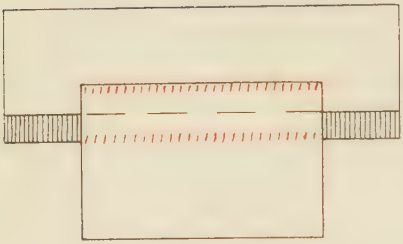


Fig. 5.

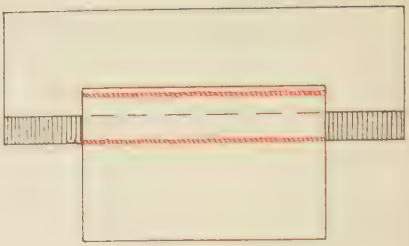


Fig. 6.

Figs. 5 and 6 also represent counter-hem seams finished by hemming and stitching. In each diagram one piece of material is *purposely* made shorter than the other. The shaded portion shows the depth of the folds.

BODICE OR DOUBLE FRENCH SEAM.

This seam is used for muslin frocks, muslin and print pinafores, petticoat bodices, and serge or other materials which are easily frayed out.

I. Place two edges of the material together so that the *wrong* sides will be to the *inside* and the *right* sides to the *outside*. The raw edges must be perfectly even, and lie above each other.

II. Tack the two pieces together about $\frac{1}{6}$ inch from the edges, and run them immediately below the tacking thread as in Fig. 1.

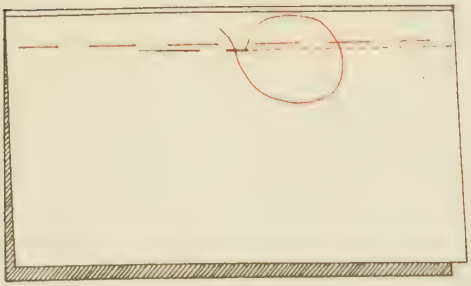


Fig. 1.

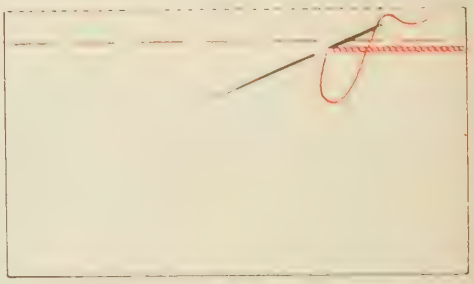


Fig. 2.

III. Remove the tacking thread, and turn the pieces to the *wrong* side so that the *right* sides now lie inside. Fig. 2.

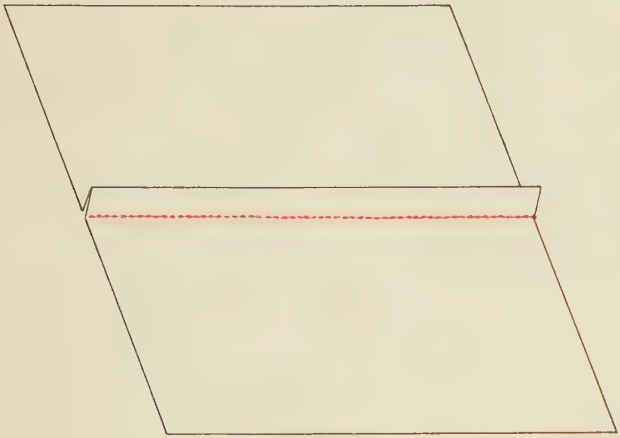


Fig. 3.—Wrong Side.

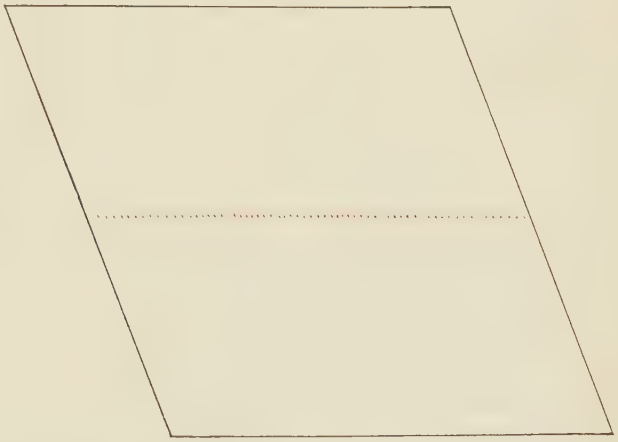


Fig. 4.—Right Side.

IV. Press up the join well, and tack just below the raw edges, or *about* ¼ inch deep.

V. Machine-stitch, or run and back-stitch firmly, close to the tacking thread.

VI. When finished it should appear as in Figs. 3 and 4 on following page, but the stitches seen in Fig. 4 are almost imperceptible.

KNOTTING.

Muslin pinafores, night-dresses, &c., are often ornamented with feather-stitching and knotting.

The diagrams show the two ways of doing the stitch.

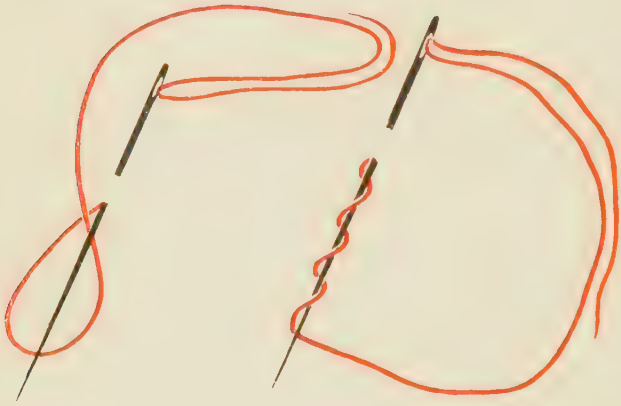


Fig. 1.

Fig. 2.

I. Method of working as in Fig. 1.

(*a*) Put in the needle as for a backstitch but in a *slanting* direction.

(*b*) Make an oval loop by passing the cotton round from left to right.

(*c*) Pass the needle (*over the long end of cotton*) and lifting the *loop up* on the needle draw the needle vertically upwards.

(*d*) Put the needle a second time into the same place *through the middle of the knot*, and taking it out at the back of the work bring it up again on the right side at the place where the next knot is to be made.

II. Method of working as in Fig. 2.

Fasten on securely and

(*a*) Insert the needle as for a backstitch in a slanting direction.

(*b*) Twist the thread coming from the material round the point of the needle 2, 3, or 4 times, according to the size of the knot desired and the coarseness of the thread used.

(*c*) Draw the knot up *closely* to the material, but avoid drawing it too tightly.

(*d*) Insert the needle again as for a backstitch into the place from which it came out (or two threads from it), and bring it out at the exact spot where the next knot is wanted.

FLAT BINDING.

Turn down the flannel on the wrong side to the depth of $\frac{1}{4}$ of an inch and baste carefully. Lay the binding above this fold so as to be from $\frac{1}{16}$ to

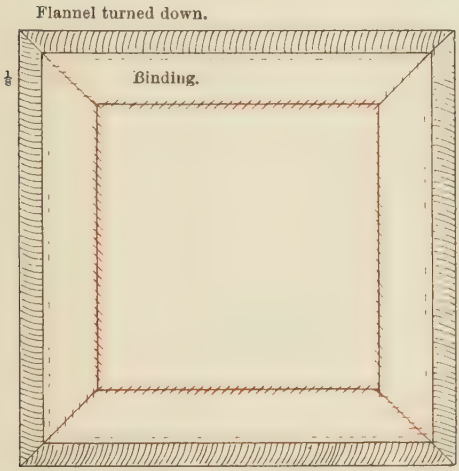


Fig. 1.—Wrong Side of Square.

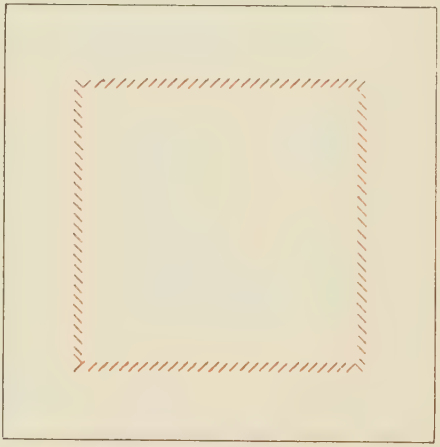


Fig. 2.—Right Side of Square.

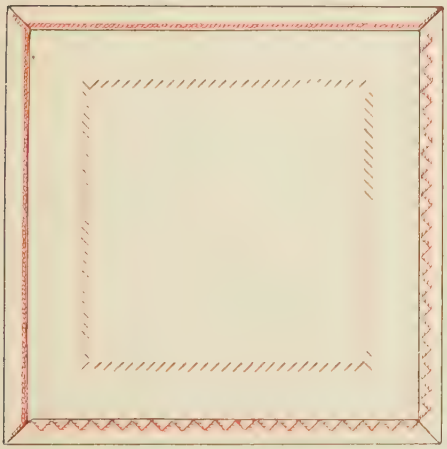


Fig. 3.

$\frac{1}{8}$ of an inch from the folded edge of the flannel. *Run* along the upper edge so that the stitches will not be seen on the right side of the garment, and then fell or run the lower edge. (See Figs. 1 and 2.) This method of binding is very suitable for infants' shawls and barrowcoats.

Fig. 3 shows different methods of finishing the *right* side of binding by the "common method". One half of the square is stitched on the *right* side and hemmed on the *wrong*; the other half is *feather-stitched* on the right side and *hemmed* on the wrong.

JOINS IN FEATHER-STITCHING.

I. *Commencement of Thread.*—On *double* material slip the needle in between the folds, about $\frac{3}{4}$ of an inch from the place where the "feathering" is to commence; bring the needle out where the first stitch is to be made; take a small back-stitch and proceed as in Fig. 1.

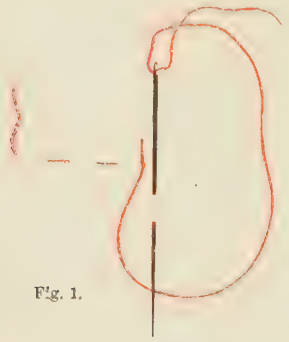


Fig. 1.

Fig. 2.

Fig. 4.

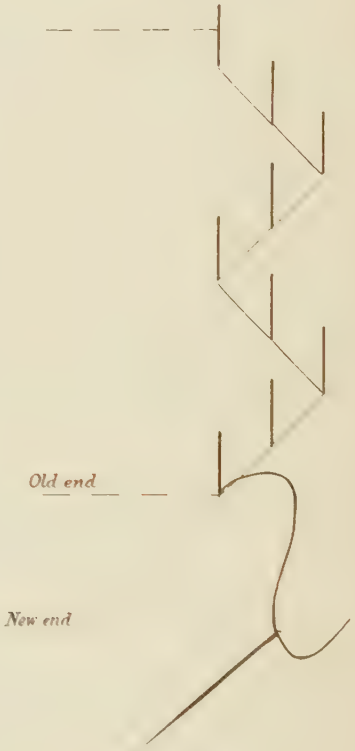


Fig. 3.

On *single* material leave a long end on the wrong side, take a small back-stitch and proceed. After the "feathering" is done, thread *the long end left on the wrong side*, and darn it over and under a few of the stitches on the wrong side as in Fig. 2.

II. *Finishing off of Old Thread.*—After working the last feather-stitch which has to be made, *turn round the work*, and make two tiny back-stitches; then slip the needle in between the folds, and bring it out on the *wrong* side about an inch from the place where it went in. Cut off what remains of the old thread. If on *single* material bring the needle through from the right to the wrong side, and darn *upwards* for a few stitches.

III. *Joining on of New Thread.*—Combine the *fastening on* of the *new* thread and the *fastening off* of the *old* one. (See Fig. 3 for *double material*, and Fig. 4 for *single* cloth.)

JOININGS IN BUTTON-HOLES.

If the thread should break (and this is what one dreads most in button-holing), it is not a *formidable* task to join a new one. You simply have to lay the *end of the broken thread* along the slit *towards the right* as in Fig. 1.

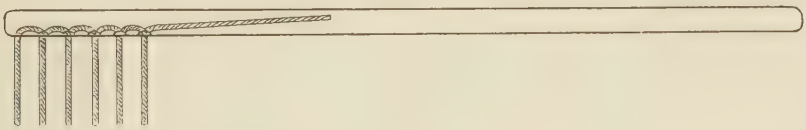


Fig. 1.

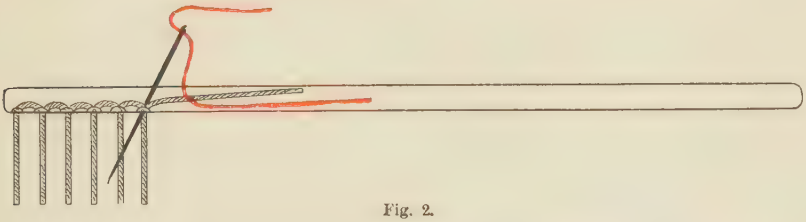


Fig. 2.

Bring the needle with the new thread up between the two stitches last made (that is, through the knot last made), and lay the end of this new thread *alongside of the old one*, as in Fig. 2, till three or four stitches are made. Then cut off the ends and proceed.

Finishing off.—Having finished the square end of the button-hole, insert your needle at the top of the last stitch made, and bring it through to the

wrong side of the band. Take a tiny back-stitch, and then slip the needle under a few of the side-stitches of the button-hole, and cut off the thread as in Fig. 3.

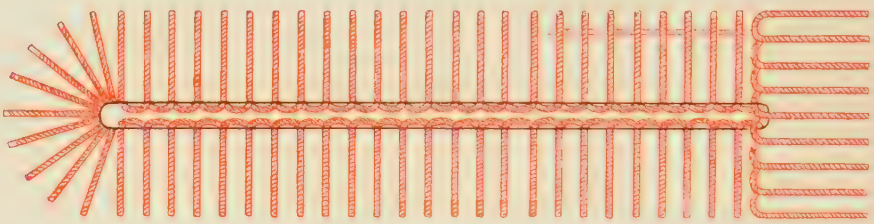


Fig. 3. Wrong Side of Buttonhole.

GENERAL REMARKS ON CALICO PATCHING.

There are several ways of inserting a calico patch. Students should know all the methods but practise only one.

(*a*) When doing a specimen, the two pieces of material representing the garment and the patch should be torn or cut *even to a thread.*

(*b*) *Right side of Calico.*—In specimen patches the right side of the calico must be noticed, but in practical patching this need not be considered except *the material be twilled,* as the first washing makes the difference (which depends solely on the dressing of the calico) imperceptible.

(*c*) *Folding of Patch.*—Fold the *selvedge* sides of the patch first and *stretch* them as far as possible, then fold the weft sides and avoid stretching them.

(*d*) *Placing of Patch.*—The chief difficulty in calico patching seems to lie in the placing of the patch evenly. As aids to this the garment may be (*a*) creased diagonally, (*b*) garment and patch creased both perpendicularly and horizontally (see Fig. 1), or (*c*) crease both garment and patch *horizontally,* and, having marked the width, draw with the point of the needle two straight lines *selvedge* way to denote the exact place where the edges of the patch are to be (Fig. 2).

(*e*) *Stitches used.*—Seaming and hemming are the two stitches generally used in calico patching. On muslin, hemming *alone* is used, and running is sometimes substituted for seaming.

Seaming being the *stronger* of the two stitches, should rest on the *patch,* and therefore it is used for the smaller or inner square.

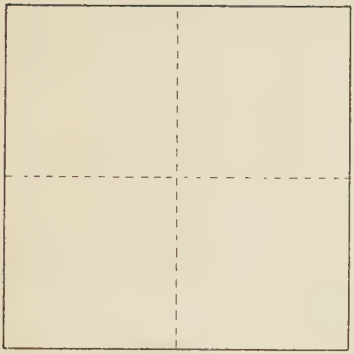


Fig. 1 (*a*).

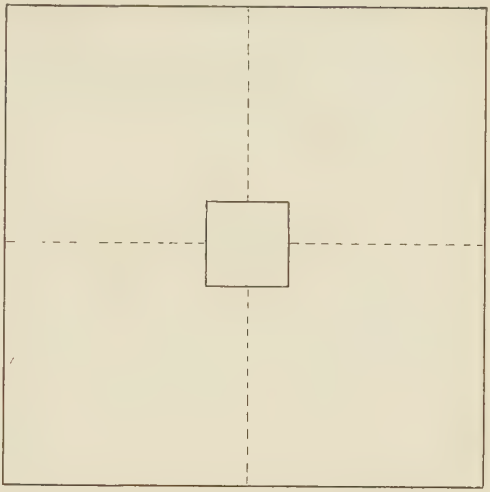


Fig. 1 (*b*).

Hemming being the *lighter* stitch, should rest on the somewhat worn garment, and is used on the larger or outer square.

Commence both seaming and hemming at the centre of one of the sides.

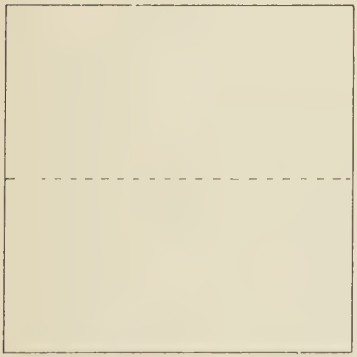


Fig. 2 (*a*).

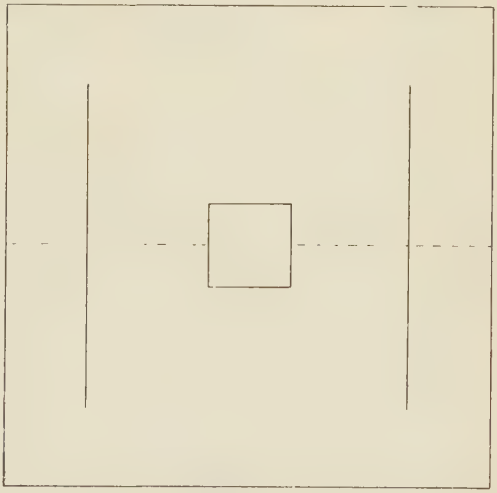


Fig. 2 (*b*).

and finish both seaming and hemming by slipping the needle in between the patch and the garment and drawing it out so as to avoid showing the join.

(*f*) *Width of fell.*—The width of the fell on the space between the seaming and hemming is generally $\frac{3}{8}$ of an inch, but it may be less or more according to the size of the patch.

GENERAL REMARKS ON HEDGE TEARS.

A hedge tear usually assumes the following shape, and is darned like Fig. 1.

(*a*) *Materials to be used.*—At examinations the darning should be done on cream-coloured flannel, the threads of which are clear and distinct. Fine embroidery thread, No. 35, or crewel silks in one or two colours, may be used. For practical mending use flax or flourishing thread for linen; for woollen fabrics use fine Angola or silk, and if any difficulty should arise in matching the colours, then unravel a piece of the stuff to be darned, and use the ravellings.

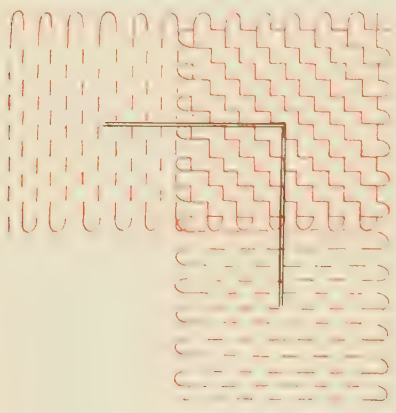


Fig. 1.

(*b*) *Practice of Darning.*—Practise the darn several times on canvas with the cut simply *pencilled or basted* in, and then on *open* flannel with the slit made.

(*c*) *Darn.*—As in the cross-cut, take up two threads, and pass over two, leaving two threads of the material between each row.

Observe that while in the cross-cut each row was lengthened at one end and shortened at the other, in the hedge tear every alternate row begins and ends on the same line.

(*d*) *How to Cross the Edges of the Tear.*—When crossing the edges of the tear, you may (*a*) take the stitch of one row *over both* edges, and the stitch of the next row *under both* edges; or (*b*) take the stitch of the first row *over one* edge and *under the other*, and the stitch of the second row over the one you went under, and under the one you went over in the row preceding, as in the following diagrams (see Figs. 2 and 3).

Remember that in an *actual* tear both sides are seldom, if ever, the same length—the selvedge side being usually shorter than the weft one.

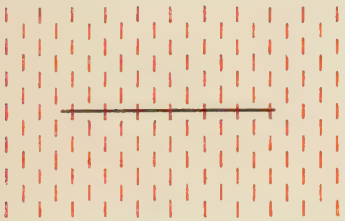


Fig. 2.

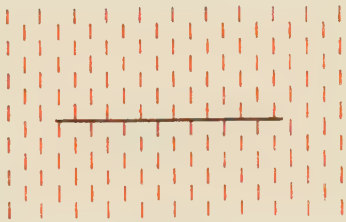


Fig. 3.

GENERAL REMARKS ON CROSS-CUTS.

(*a*) *Materials.*—The best material for practising these cuts on, *after canvas* (at least for examination purposes), is Saxony cloth or coarse linen. Fine flourishing, or better, flax thread, with a straw needle, or No. 6 long one, should be used with this. But even with these comparatively coarse materials (a great advance on the fine shirt-fronting linen on which students' darning used to be done), you will do well to remember that too much practice *must injure* the eyesight.

(*b*) *Size of Stitch.*—Over two threads and under two threads, with two threads of the material *between each row*, is what is wanted. Students need not add to the difficulty of the exercise by lifting only one thread and passing over one. When darning tablecloths, take up a small piece of the material, and pass over the same length.

(*c*) *Right and Wrong Sides.*—Darn on the *wrong* side of the material. Keep the raw edges of the cut to the same side, and try to avoid fraying them out by keeping the thumb firmly on them while the thread is being drawn through.

(*d*) *Loops.*—Always leave loops to allow for shrinking, but do not make them too long. From $\frac{1}{16}$ to $\frac{1}{8}$ of an inch is quite sufficient.

(*e*) *Cut on the Diagonal of a Square.*—Remember that though a cut on a tablecloth may be at any angle (and, therefore, for practical purposes should

be practised in various positions), for specimens the cut is made exactly on the bias or diagonal.

The cut must also be *parallel to the bases of the two triangles* by which it is enclosed. Fig. 1 shows the right position of the cut when properly darned; Fig. 2 the *wrong* position.

(*f*) *How to Plan the Shape of the Darn.*—Fig. 1 shows that the cut has to be enclosed in two rhomboids, or, from another point of view, two triangles. This may be done:—

(*a*) *By Pencilling the Outline.*—I see no reason why this method should

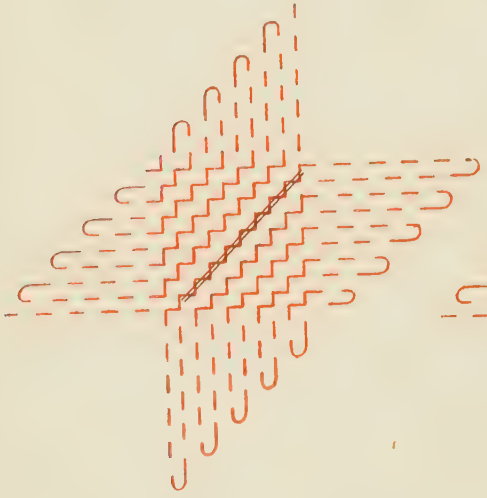


Fig. 1.

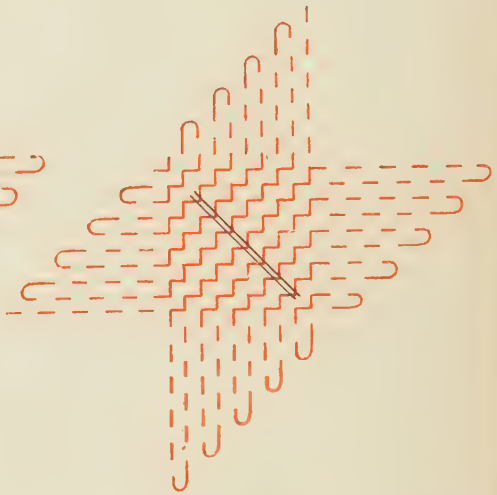


Fig. 2.

not be followed, provided the pencilling be done with a crayon of the same colour as the thread used, but some examiners condemn it.

(*b*) *By Creasing two Folds.*—A *horizontal* one *above* the cut and a *perpendicular* one at *right angles to the former*, either at the right hand or at the left.

The second crease depends on the *direction the cut takes*, right to left, or left to right. Figs. 3 and 4 will show you what is meant.

(*c*) *Darning.*—You may darn either by two triangles or by two rhomboids, but the latter is the easier way. The letter A is the apex of the triangle of which the cut is the base. Darn the *selvedge* way first.

First Rhomboid.—Commence at A. Stop when you reach B, and count the number of stitches on the needle, and take exactly the same number beneath B. If there are nine stitches from A to B, eighteen will be the length of the rhomboid.

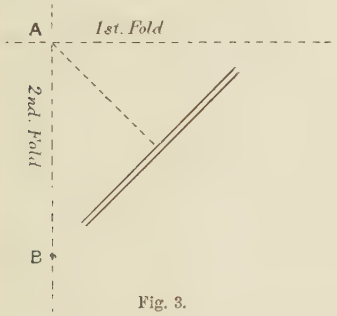


Fig. 3.

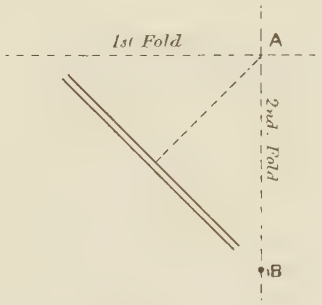


Fig. 4.

The *second* row will commence two threads to the right or left of the first row, as the slant must go in the direction of the cut (see Fig. 1).

Second Rhomboid.—Begin the second where you commenced the first at A, and be careful that the stitches show through *clearly to the right side.*

GENERAL REMARKS ON HEMMING.

(*a*) *Folding.*—Hems may be turned *with* the selvedge or *across* it. They are *easier to turn* with the selvedge, but when folded along the weft way the stitches *show up better.* The first turn should be a narrow fold, the second deeper, except when *transparent* material such as muslin is used, when the folds should be of the *same depth.* When folding *straight* material, press the second finger along the back of the fold; if *curved,* pleat the material between the thumb and forefinger of the right hand.

(*b*) If the fold be made along a *concave* curve, stretch it to make it lie flat; if along a *convex* curve, ease it, or else it will be puckered.

(*c*) *Tacking.*—All hems should be tacked, as it is really a saving of time to do so.

(*d*) *Stitch.*—Avoid *small* stitches, 12 to 14 stitches to an inch of hemming

are *amply* sufficient. See that the stitches are shaped like an *open* and regular. The open shape can be secured by pointing the needle up the *middle* of the left thumb nail.

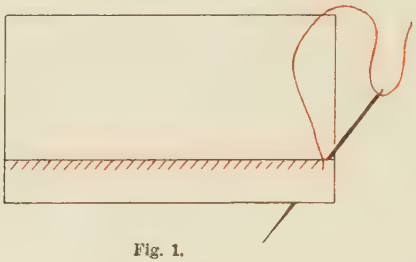


Fig. 1.

(*e*) *Joinings.*—Pay attention to the *joinings* and *endings off.* The simplest way *to finish off* is to make another stitch over the last one, turn the work *upside down*, slip the needle between the folds of the hem as far as it will go, and bring it through the edge as in Fig. 1.

GENERAL REMARKS ON SEW-AND-FELL.

(*a*) *Depth.*—Seams vary according to the material used, but from $\frac{1}{8}$ to $\frac{1}{4}$ of an inch is the general width. All seams must, however, lie perfectly *flat.*

(*b*) *Parallel Seams.*—If a garment have two parallel seams, the fells should *face*, and to make them do so, notice the *turnings.* In night-dresses and chemises, see that the *right hand seams* are turned from the *arm-holes*, and the *left* ones from the *foot hems*; in drawers the *right-leg seam* should be turned from the *foot hem*, and the left one from the *seat*; a *right*-arm sleeve should turn from the *wristband*, while the *left* should be begun from the *shoulder.*

In working top-sewing and sew-and-fell, pleat up as much of the longer end of the seam as may be held with ease between the thumb and forefinger of the left hand, to prevent the shape of the stitch being spoiled and to keep the shorter end in place.

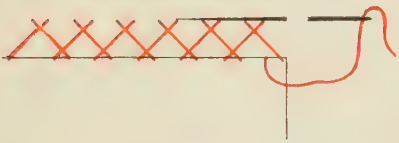
(*c*) *Seaming of Curves.*—As slanting or curved seams occur in most garments, practise these, and remember (when seaming sleeves of which one

side is straight and the other oblique) (*a*) to lay the *double fold* on the straight side, as the slant would stretch and the seam be puckered, and (*b*) to hold the slanting side towards the chest when working the seam.

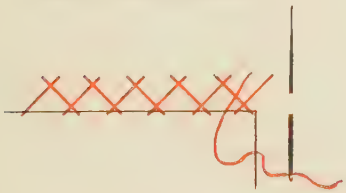
HOW TO TURN CORNERS IN FLANNEL PATCHES.

I. Inner Square.

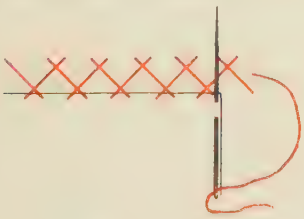
First Position of Needle.



Second Position of Needle.



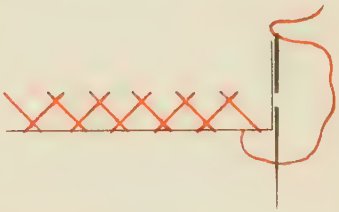
Third Position of Needle.



Fourth Position of Needle.

II. Outer Square.

First Position of Needle.



Second Position of Needle.

Third Position of Needle.

OVERCASTING.

Overcasting is used to prevent raw edges from fraying out. There are two methods of overcasting seams (see Figs. 1 and 2).

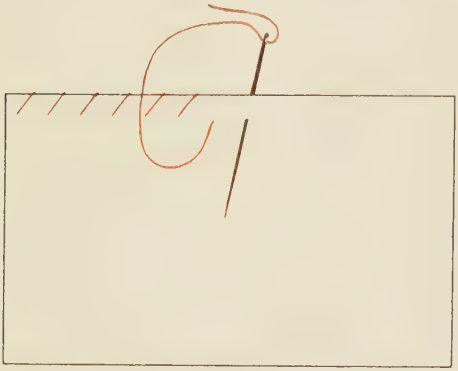


Fig. 1.

Overcasting, as done in Fig. 1, is seaming or top-sewing the two raw edges together after they have been carefully trimmed.

The only *difference* is that in overcasting you may begin (dressmakers always do) at the *left-hand* side instead of the right, and that a rather larger space is left between the stitches.

The stitches should be about $\frac{1}{6}$ of an inch in depth and not too close, as from six to eight stitches to an inch are amply sufficient.

The second method (see Fig. 2), though sometimes called overcasting, is generally known as embroidery, scalloping, or blanket stitch. It is used for

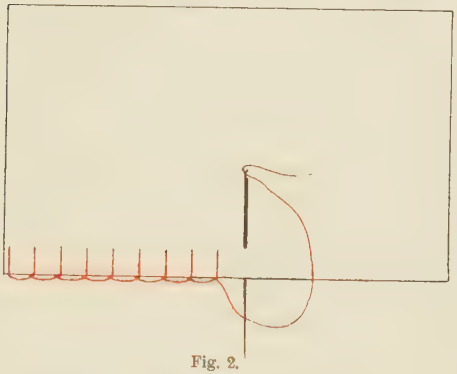


Fig. 2.

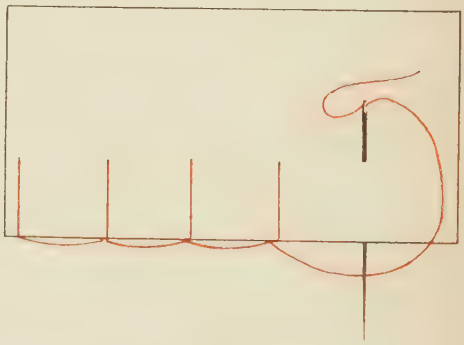


Fig. 3.

overcasting serge materials as well as print. Be careful not to draw the thread too tightly or the raw edges will get rolled into a ridge.

If used for overcasting, the stitches should be from $\frac{1}{8}$ to $\frac{1}{6}$ of an inch deep, and the same distance apart; when used for *edging blankets* they should be

from $\frac{1}{4}$ to $\frac{5}{8}$ of an inch deep and apart (see Fig. 3); when used for *embroidery* they should be quite close together, and the size will vary according to the depth of the scallop (see Fig. 4).

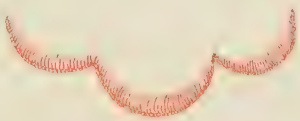


Fig. 4.

HOW TO FINISH A SLEEVE WITH FALSE HEM AND EMBROIDERY.

(*a*) *Cross False Hems.*—The false hem will consist of a strip of calico cut on the bias or cross. Cross-way material must be used, because it may be stretched so as to fit the curve of the sleeve. The material may be obtained

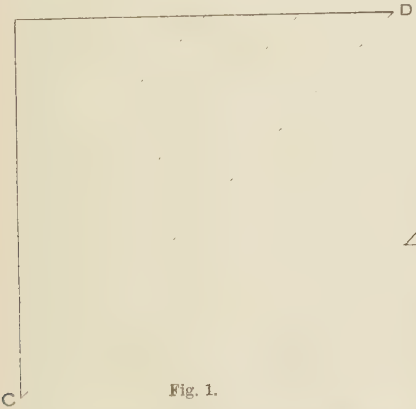


Fig. 1.

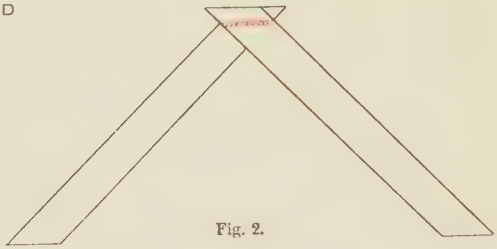


Fig. 2.

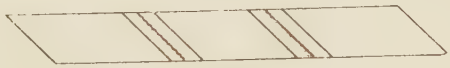


Fig. 3.

(*by joining*) from the oval piece cut out of the neck of the chemise, or from a square of calico used for this purpose only. If obtained from the oval, cut out the largest square from it you can, and then fold it diagonally from C to D, as in Fig. 1.

The depth of the strip should be about $1\frac{1}{4}$ inches, or less if a narrower hem be preferred.

If the strips are not sufficiently long to go round the sleeve, join, as in Fig. 2, by putting the right sides one above the other, and the long pointed ends to the short pointed ones.

Back-stitch or run and stitch about $\frac{1}{6}$ of an inch from the edges, and flatten out as in Fig. 3.

I. Arrangement of embroidery for false hem joined to wrong side of sleeve.

The embroidery should be from $\frac{3}{4}$ to $1\frac{1}{2}$ inches in depth. *Cut* away all but about $\frac{1}{2}$ inch of the plain muslin of the embroidery.

Make tiny pleats about $\frac{1}{8}$ of an inch in depth along the embroidery band, leaving 1 to $1\frac{1}{2}$ inches between each pleat, and tack lightly (see Fig. 4, pleated embroidery).

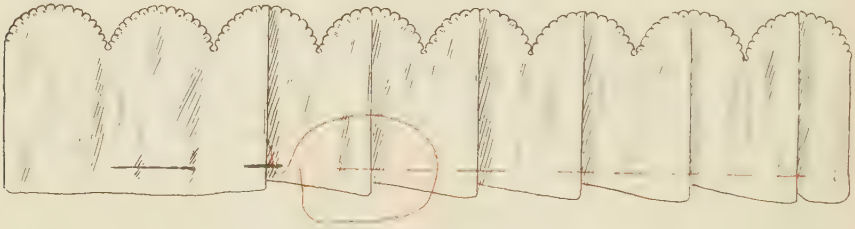


Fig. 4.

Have the right side of the sleeve *up*. Place the right side of the embroidery *above* the sleeve with the raw edges even, and join at the seam by a counter hem.

(*a*) *How to finish the False Hem.*—Take the cross-way band and lay a fold

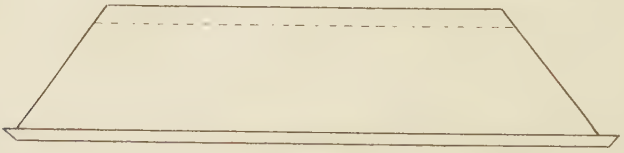


Fig. 5.

$\frac{1}{6}$ of an inch in depth along each edge on the wrong side; open up one of these folds (see Fig. 5).

Place this cross hem *above* the embroidery and sleeve, and stitch or run and stitch the three thicknesses together (see Fig. 6).

Fig. 6.

Fig. 7.

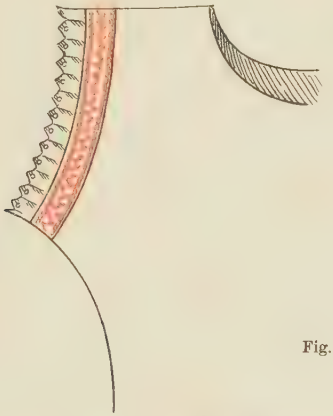


Fig. 8.

Having joined neatly, turn over the false hem; smooth and flatten down nicely.

The cross band may then be finished by hemming on the *wrong* side, or by stitching or feather-stitching on the *right* side. When finished it should appear as in Fig. 7.

II. If the false hem is to be on the *right* side of the sleeve, you must proceed thus:—

(*a*) Turn the garment so as to have the *wrong* side of the sleeve upwards.

(*b*) Pleat the embroidery, lay it with the *wrong* side on the garment, and tack.

(*c*) Place the *right* side of the false hem above the trimming, run and stitch or back-stitch the three *thicknesses* together, fold the false hem over to the *right* side, and finish by stitching or feather-stitching. Hemming must not be used on the right side. (See Fig. 8.)

SCALE OF PROPORTIONS FOR CHEMISES.

1. *Body.*	(*a*) Length	= $\frac{2}{3}$ of the wearer's height.
	(*b*) Width	= $\frac{7}{8}$ of the length in women's sizes, but from 2 inches to 4 inches less than the length in smaller sizes.
2. *Sleeves.*	(*a*) Length	= From $\frac{1}{4}$ of the length of chemise in children's sizes to $\frac{1}{6}$ of the length in girls' and women's sizes.
	(*b*) Depth	= When cut out by themselves and inserted in garment = $\frac{1}{3}$ of the length of the sleeve.
3. *Slope of the Sleeve.*	(*a*) At top	= $\frac{1}{1\frac{1}{2}}$ of the width of the chemise.
	(*b*) Under the arm...	= $\frac{1}{6}$ to $\frac{1}{3}$ of the top slope.
4. *Side Slopes of Chemise*	... ...	= In widest part $\frac{1}{7}$ of the width, or $\frac{1}{8}$ of the length of chemise.
5. *Neck Curves.*	(*a*) Depth in front...	= $\frac{1}{8}$ of the length of chemise.
	(*b*) Depth in back ...	= From $\frac{1}{2}$ inch to 1 inch less than that of the front.
6. *Neckband.*	Generally	= Half the width of the chemise at the foot-hem, but it may be longer or shorter.
7. *Shoulder*	... ...	= About $\frac{1}{8}$ of the width of the garment if the sleeves are included, but about $\frac{1}{6}$ when the sleeves are inserted.

SCALE OF PROPORTIONS FOR DRAWERS.

1. *Length* ... ... = $\frac{5}{9}$ of the wearer's height.
2. *Breadth* ... ... = 8 inches more than the knickerbocker length, but varies a little, thus:

Length.	Breadth.	Length.	Breadth.	Length.	Breadth.	Length.	Breadth.
32	36	24	32	20	28	16	24

3. *Length of Leg* ... $= \frac{7}{16}$ in full sizes, but varies downwards—

Full Length.	Length of Leg.	Full Length.	Length of Leg.	Full Length.	Length of Leg.	Full Length.	Length of Leg.
32	14	24	19	20	$7\frac{1}{2}$	16	$5\frac{1}{2}$

4. *Width of Leg at Knee* $= \frac{2}{3}$ or $\frac{5}{8}$ of the whole width of the leg.
5. *Back Slope* ... ... = About $\frac{1}{6}$ of the whole width of the leg.
6. *Depth of the Slope in the Middle of the Leg* $= \frac{1}{6}$ or $\frac{1}{5}$ of the whole length of the leg.
7. *Front Slope* ... ... $= \frac{1}{10}$ of the length downwards, and $\frac{1}{6}$ or $\frac{1}{5}$ of the width inwards.
8. *Waistband* ... ... (*a*) Length = size of the wearer's waist + 2 inches for buttoning.
   (*b*) Depth = $1\frac{1}{2}$ to 2 inches if straight, $2\frac{1}{2}$ to $3\frac{1}{2}$ inches if circular.

SCALE OF PROPORTIONS FOR NIGHT-DRESSES.

1. *Length of Night-dress*		= $\frac{7}{8}$ or $\frac{8}{9}$ of the wearer's height.
2. *Bust Measure*		= $\frac{2}{3}$ of wearer's height.
3. *Width of half the Night-dress at the Bottom*		= $\frac{2}{3}$ of the length of night-dress.
4. *Collar Band.*	(*a*) Length	= Width of wearer's neck + $1\frac{1}{2}$ inches.
	(*b*) Depth	= 1 inch when doubled.
5. *Armholes.*	(*a*) Length	= Nearly $\frac{1}{2}$ of the widest part of the sleeve.
	(*b*) Slope	= From $1\frac{1}{2}$ to 3 inches.
6. *Sleeve.*	(*a*) Length	= Length of collar in small sizes up to $1\frac{1}{4}$ of collar length in large sizes.
	(*b*) Width at shoulder	= Same as the length before the sleeve is doubled.
	(*c*) Width at wrist ...	= $\frac{2}{3}$ of the width at shoulder.

7. *Wristband.*
   (*a*) Length ... ... = $\frac{1}{2}$ the collar length + 1 to 2 inches.
   (*b*) Depth when doubled = $\frac{1}{8}$ to $\frac{1}{4}$ of the wristband length.

8. *Binders or Shoulder Linings.*
   (*a*) Length ... ... = Length of armhole + 2 to 3 inches.
   (*b*) Width ... ... = According to taste, but 2 inches generally preferred.

9. *Yoke.*
   (*a*) Length ... ... = 1 to $1\frac{1}{2}$ of the collar-band length.
   (*b*) Depth ... ... = $\frac{1}{4}$ of the yoke length.
   (*c*) Length of shoulder = $\frac{3}{8}$ of the yoke length.
   (*d*) Neck curve ... = (*a*) Width = $\frac{1}{3}$ of the yoke length.
   (*b*) Depth = $\frac{3}{4}$ to 1 inch.

10. *Front Fold.*
   (*a*) Length ... ... = Length of collar after the front neck curve is made.
   (*b*) Width ... ... = 1 to 2 inches.

SCALE OF PROPORTIONS FOR SHIRTS.

1. *Body* or *Skirt.*
   (*a*) Length of back ... = $\frac{5}{8}$ of wearer's height.
   Length in night-shirt = $\frac{3}{4}$ of wearer's height.
   (*b*) Length of front ... = 2 inches less than the back.
   (*c*) Width ... ... = Same as the length of front in boys' sizes; $\frac{3}{5}$ of length in men's sizes.
   (*d*) Armholes, length ... = $\frac{1}{4}$ of the width of the front skirt, or half the width of collar + 1 inch.
   „ slope at top = 2 to 3 inches.
   (*e*) Side openings, length = 8 to 10 inches.
   (*f*) Side seams, slope ... = $\frac{1}{2}$ to $1\frac{1}{4}$ inches.

2. *Collar Band.*	(*a*) Length ...	... = Size of wearer's neck + $1\frac{1}{2}$ inches.
	(*b*) Depth ...	... = 1 to $1\frac{1}{2}$ inches at back; $\frac{3}{4}$ inch at front.
3. *Collar.*	(*a*) Length ...	... = Width of neck.
	(*b*) Depth ...	... = 2 to $2\frac{1}{2}$ inches at back; about 4 inches if pointed in front.
4. *Blouse* or *Yoke.*	(*a*) Length ...	... = Length of collar + 1 to 2 inches.
	(*b*) Depth ...	... = $\frac{1}{4}$ of its own length.
	(*c*) Depth at shoulder ...	= $\frac{1}{8}$ of its own length.
5. *Sleeves.*	(*a*) Length ...	... = Length of yoke.
	(*b*) Width at shoulder ...	= Same as length of sleeve in boys' sizes; about 2 inches less in men's sizes.
	(*c*) Width at wrist ...	= $\frac{2}{3}$ of the width at the shoulder.
	(*d*) Wrist opening ...	= About $\frac{1}{2}$ of the length of the wristband.
6. *Wristband.*	(*a*) Length ...	... = Half the length of the yoke.
	(*b*) Depth ...	... = $\frac{1}{2}$ its own length.
7. *Binder* or *Shoulder Linings*	... ...	... = 2 inches wide carried round the armhole.
8. *Front Opening*	... ...	... = Length of collar.
9. *Front Fold.*	(*a*) Length ...	... = Length of front opening + 1 inch.
	(*b*) Width ...	... = $1\frac{1}{2}$ to 2 inches when finished. If the fronts are inserted then the width would be from $4\frac{1}{2}$ to 5 inches.
10. *Neck Curve.*	Depth in front ...	... = $\frac{1}{6}$ of collar band.

CALICO SAMPLER FOR PUPIL-TEACHERS—FOURTH YEAR.

(Plate 1.)

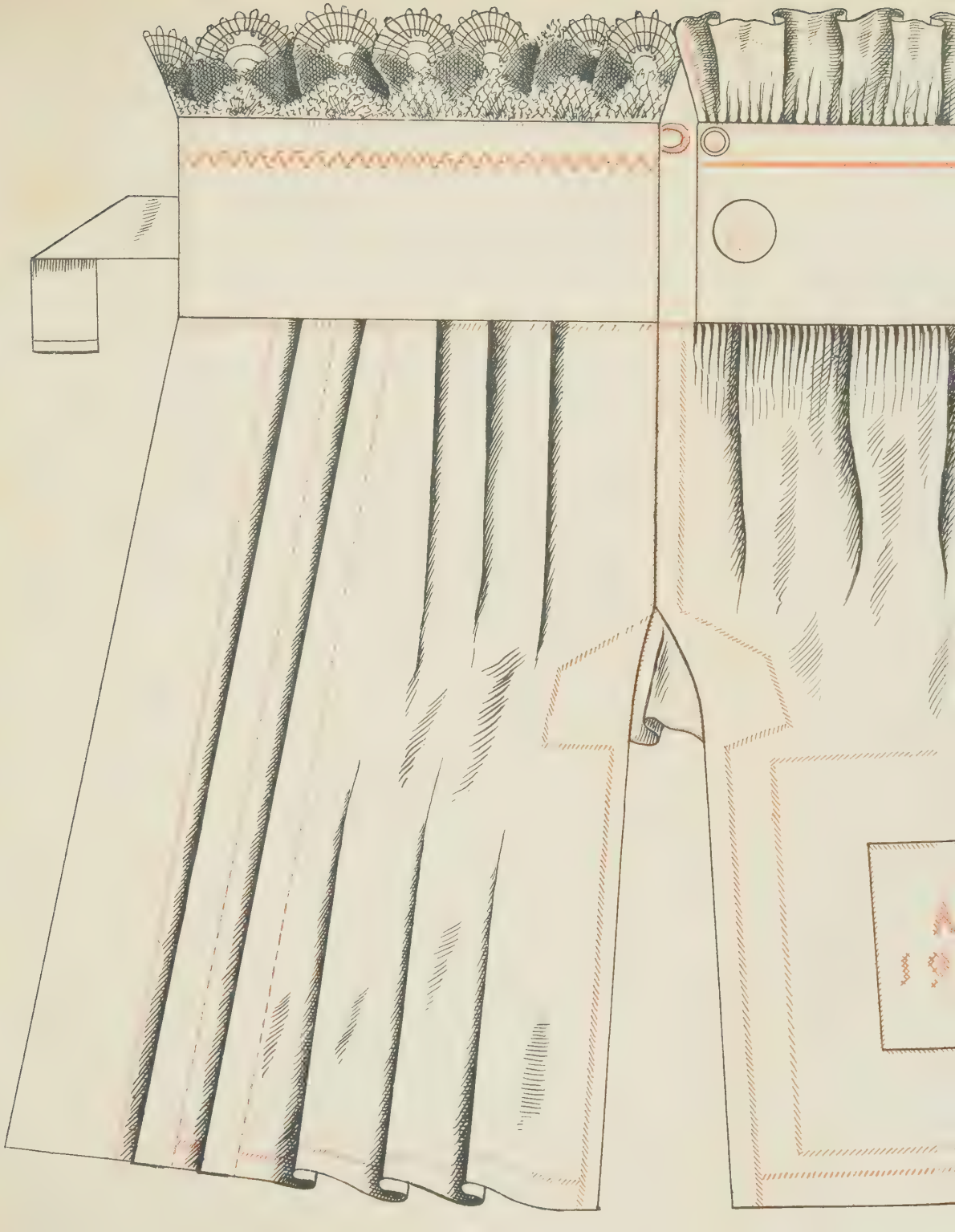
Materials required—

1. $\frac{1}{4}$ yard of calico, 36 inches wide.
2. 7 inches Indian or linen tape, $\frac{1}{2}$ inch broad.
3. 10 inches mull muslin, $1\frac{1}{8}$ inches broad.
4. 1 linen button.
5. 1 small pearl button.
6. 1 No. 60 and 1 No. 80 or 100 pink or blue cotton reel.
7. 1 ball of No. 10 pink or blue Maltese thread.
8. $\frac{3}{8}$ yard of Torchon lace.

The calico may be subdivided into—

1. Left-hand piece, 7 inches selvedge way by 8 inches.
2. Centre piece 7 „ „ $7\frac{1}{2}$ „
3. Right-hand piece, 7 „ „ 4 „
4. Left-hand band, $3\frac{1}{4}$ „ „ $2\frac{3}{4}$ „
5. Centre band, $4\frac{1}{2}$ „ „ $2\frac{3}{4}$ „
6. Right-hand band, $1\frac{3}{4}$ „ „ $2\frac{3}{4}$ „
7. Patch, 3 inches square.
8. Gusset = triangular piece half of 3 inches square.
9. Strip for the piping or cording of the right-hand division should be cut on the cross, and be about 5 inches long by $\frac{3}{4}$ inch deep.

N.B.—Calico as well as flannel samplers may be arranged as the makers choose. The above is only given as a guide.



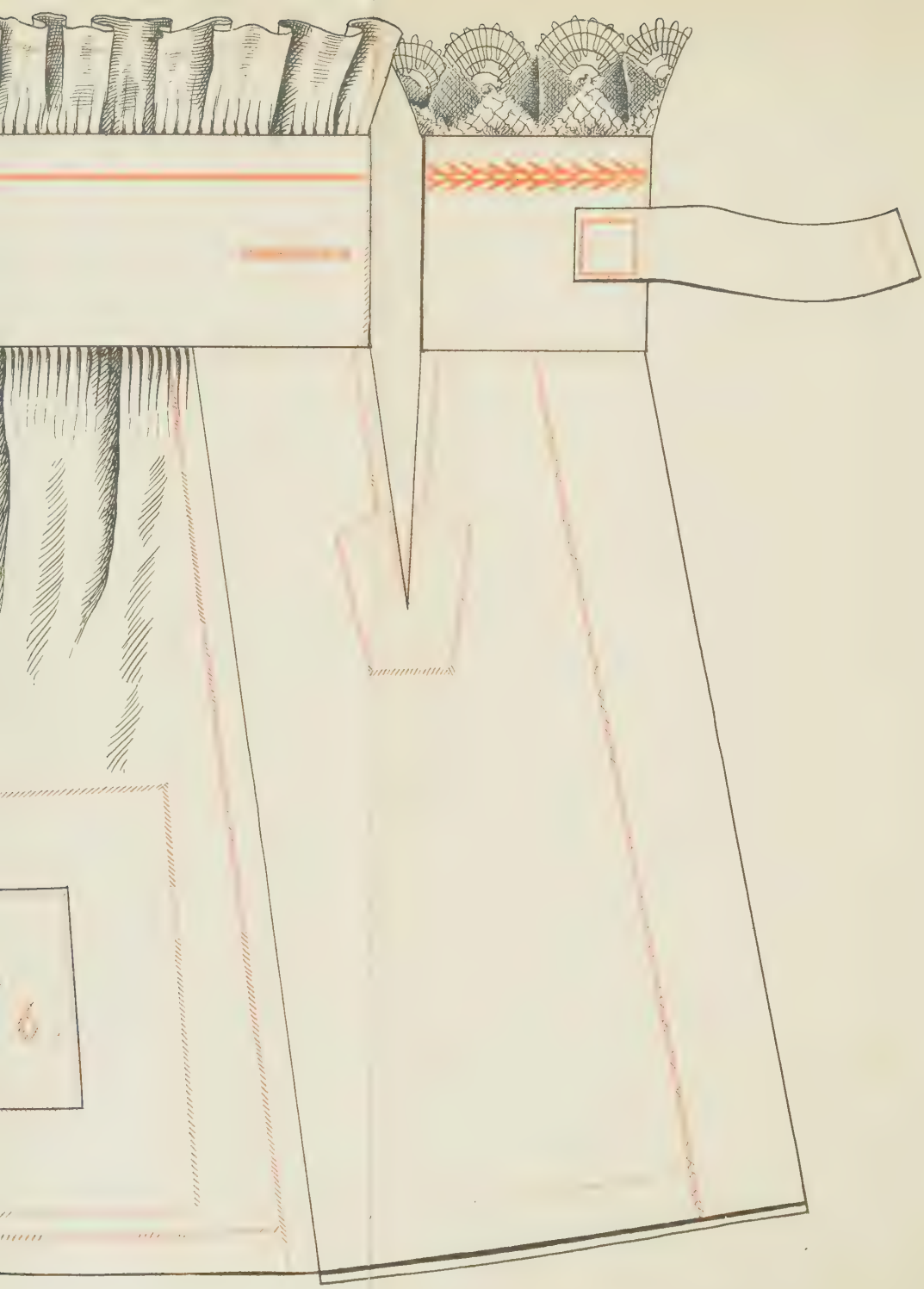


PLATE I

FLANNEL SAMPLER FOR PUPIL-TEACHERS—FOURTH YEAR.

(Plate 2.)

Materials required—

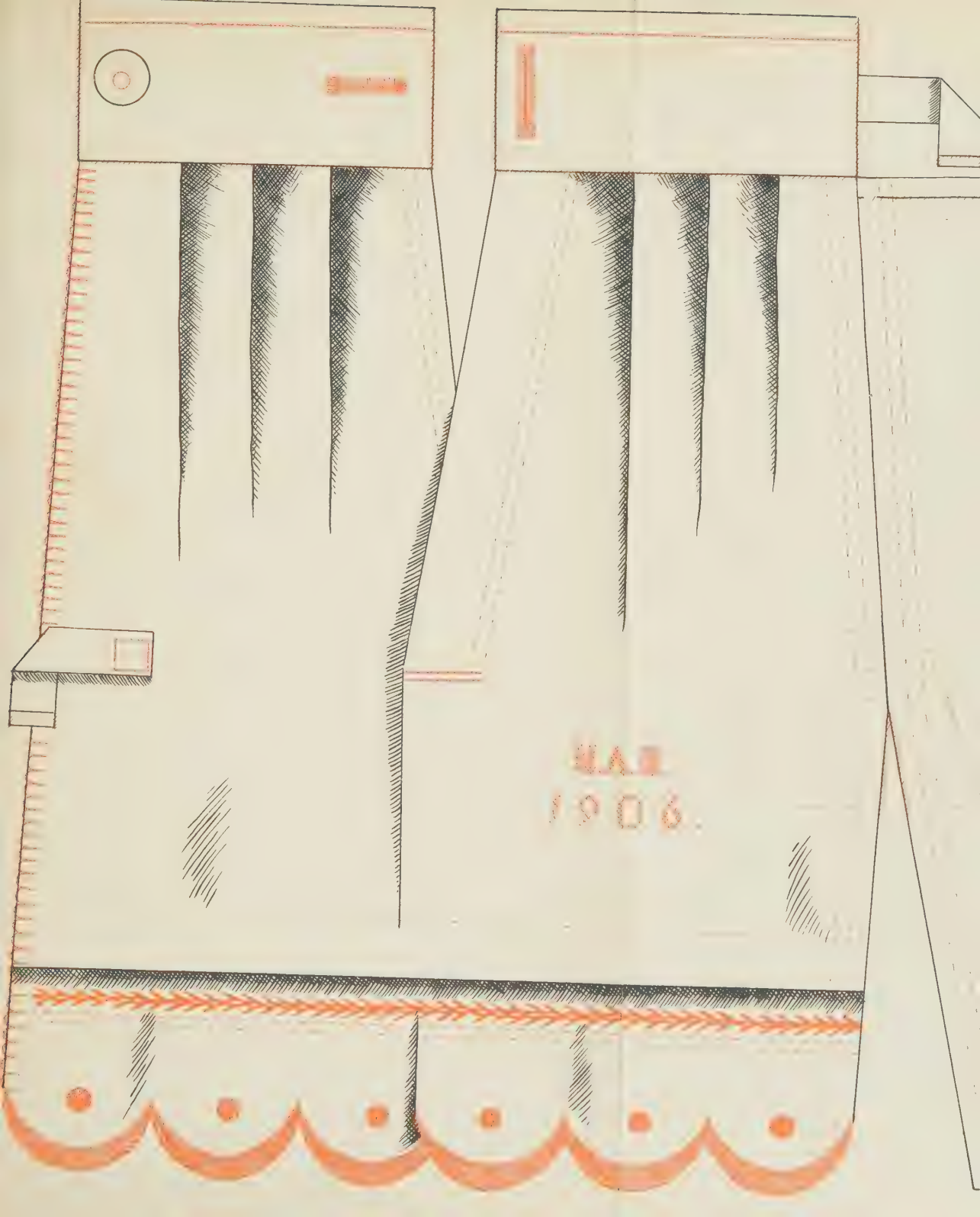
1. ½ yard of rather open cream-coloured flannel.
2. 2 pieces of calico, each $4\frac{1}{2}'' \times 2\frac{3}{4}''$, for bands.
3. 1 yard of cream-coloured or crimson flannel binding, $\frac{5}{8}$ inch broad.
4. 5 inches of Indian tape.
5. Scarlet or crimson reel, No. 40.
6. Skein of Angola wool or flax thread for darns.
7. 2 skeins of scarlet or crimson silk twist for scalloping, &c.
8. Linen button.
9. ½ yard of Brigg's transfer pattern for scalloping.

The flannel may be subdivided into—

1. Left-hand piece = 15 inches square. This allows 2 inches for the foot-hem and 2 inches for the tuck above.
2. Centre piece = $13'' \times 7''$, which allows 2 inches for a foot-hem also.
3. Right-hand piece = $11\frac{1}{4}'' \times 7''$, which requires no foot-hem, as the edge is simply turned in to the depth of ¼ inch, and a piece of binding run on on one side, and hemmed down on the other. (The running stitches do not appear on the right side.)
4. Square of 3 inches for centre patch.
5. Square of 2½ inches for gusset.
6. Half of square of 3 inches for triangular patch.

N.B.—The working of these samplers is clearly shown in the various lessons throughout this book.

END.



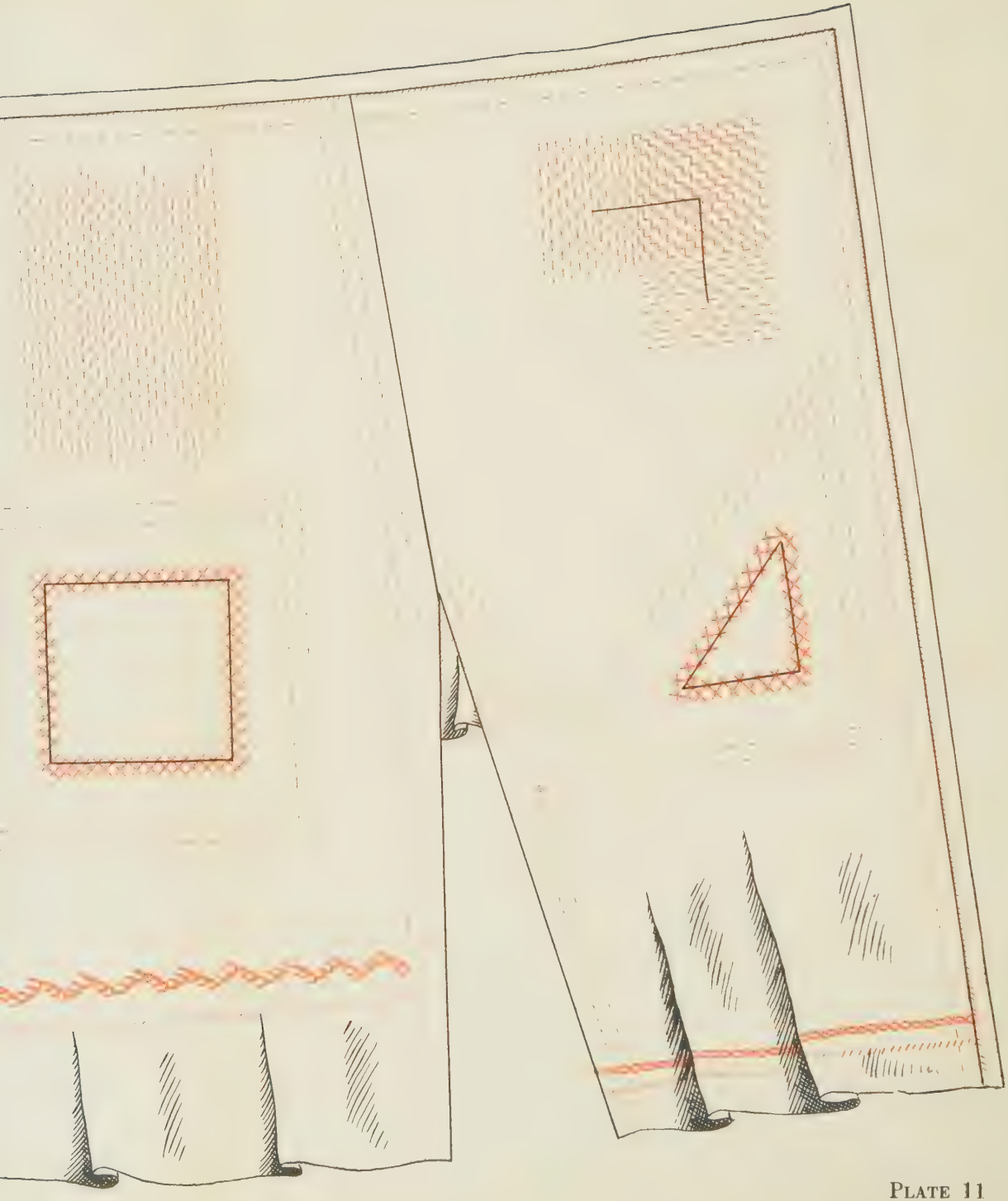


PLATE 11

INDEX.

Alphabet, marking, 138.
Apparatus, 1, 3.
Apron, cooking, 246.
Arrows, 227.

Baby's frocks, 243. [238.
— night-dress, with blouse,
— — without blouse, 238.
— threaders, 7.
Band, how to make, 44.
Barrowcoat, 252.
Basting stitches, 23.
Binding of flannel, 189.
Binding, flat, 275.
Blanket stitch, 168.
Bodice seams, 272.
— low-necked, 252.
Button-holes, 105.
— position of, 114.
— rounded end, 108.
— square end, 110.
Button-holing stitch, 107–168.
— on calico, how to cut and work, 112.
— joinings, 277. [103.
Buttons, sewing on by star,
— — by stitched circle, 104.

Calf of stocking, 74.
Calico patching, preparation, 160; general remarks, 278.
— — sewing of, 164.
— right and wrong sides, 35.
— sampler, 280.
— — diagram, 280.
Cambric, 178.
Canvas, Penelope, 38.
— samplers, 38, 42.
Casting off loops, 26.
— on loops, 24.
— — with three needles, 48.
Chain edge, 25.
— stitch, 209.
Chemises, girls', 5–12 years, 232, 233.
— woman's, 231, 232.
— with narrow shoulders and little sleeve, 234.
Chequered cutting-out boards, 2.
Child's first shirt, 115.
— — — directions for making, 118.
Circular bands, 186.
Collars, 259.
Coloured chalks, 2, 3.
— sewing cottons, 3.
Combinations, girls', 249.
— woman's, 248.
Commencement of thread in stitching, 43, 47.
Cooking apron, woman's, 246.
Coral stitch, 182.
Cording materials, 150.
Corner in herring-bone stitch, 54; in flannel patch, 285.
Counting of threads, 29.
Cross-cut darn, 198, 281.
Cross-stitch, 52.
Cross-way band for sleeve of chemise, 142, 287.
Cross-way or bias material, how to cut, 143.
— — — join, 151.
Cuff, ribbed, 34.
Cutting-out, Part II., 227.
— 1st lesson, square and triangle, 89.
— 2nd lesson, child's first shirt, 115.
— 3rd lesson, pinafore by folding, 119.
— — — without folding, 121.
Cuttings, 3.

Darner, threading of, 38.
Darning a hole in stocking web, 130.
— a thin place in stocking web, 130.
— — on canvas, 38.
— — on flannel, 38.
— — on stocking web, 78.
Darning, why we leave loops, 40, 82.
Decreasings in knitting, 74.
Demonstration frame, 1, 2.
Diagonal cut, 192.
— flannel patch, 89.
Diagrams, 3.
Diagrams, cutting out, 228, 252.
Directions for making up boy's shirt, 257.
— — chemises, woman's, 255.
— — cottage pinafore, 98.
— — drawers, 263.
— — night-dress, woman's, 261.
— — overall, 267. [265.
— — petticoat with bodice,
— — — with shoulder straps, 253.

Edges, 194.
Edgings, 192, 194.
Embroidery stitch, 168.
Extension paper, 93.
Eyelet holes, 209.
— hole, marking, 135.

False hems, on the cross, 142–145, 287.
— — on the straight, 264.
Fastening on and off, hemming, 17, 19, 20.
— — — seaming, 29, 30.
Faults in darning, 134.
— — gathering, 74.
— — stitching, 44.
— — top-sewing, 31.
Feather-stitch, 182.
— joins, 276.
Fell, 37.
— flannel, 37.
Fent, 148.
"Field", 227.
Fine-drawing a hole, 201.
Finishing-off seaming, 30.
Fish-bone stitch, 201.
Fixing and tacking a hem, 21–23.
Flannel, binding, 189.
— darning a thin place, 38.
— fastening on and off in, 55.
— right side of, 83.
— patch, 82.
— — herring-boning of, 86.
— patching, remarks on, 88,
— petticoats, 245. [285.
Flannel sampler, 281.
— — diagram, 281
— seams, for petticoats, 145
— — for vests, 147.
— stitch, 52.
Flat binding, 275.
Flattening of seams, 30.
Fleecy worsted, 13.
Folding of hems, 21.
— — opposite sides, 60. [78.
Formation of stocking-web,
French seam, double, 272.
Frills, whipping up, 178.
— sewing on, 178.
Frilling, 178–182.
Frocks, infant's, 243.
Front folds, 195.
Front opening of chemise, 140.
Front plait of night-dress, how to prepare, 195.

Gathering, 66.
— setting in, 72.
— stitch, 69.
— stroking of, 70.
— stroking and setting into band, 65.
Grafting, 216.
Gussets, insertion of, 176.
— preparation of, 173.
— stocking, 126.

Hedge tear, 203, 280
Heels of socks and stockings, 123–128.
Hemming, puckered, 19.
— second lesson, 17.
— sheet, 9.
— split, 20.
— straight, 20.
Hems, remarks on, 20, 283.
— width of, 21.
Hem-stitching, 211.
Hems on joined material, 59
Herring-bone stitch, 52.
— — — finishing off thread, 55.
— — — turning of corners 54.

How to arrange wires in knitting, before joining, 49.
How to cut out a chemise by folding, 98.
How to cut out a cottage pinafore by folding, 94.
How to draw out threads, 46.
How to fix hems over the ends of seams, 59.
How to make a band, 44.
How to prepare front opening of night-dress, 195.

Inch-tapes, 90.
Infant's flannel, 252.
— night-gowns, 238.
— shirts, 115.
Ingrain cotton, 135.
Intakes, knitting, 75.
— toe, 129.

Joins in blanket stitch, 169.
— in button-holing, 114.
— in hemming, 19.
— in knitting, 50–51.
— in seaming, 30.
— in stitching, 47.
— in feather-stitching, 276.
— in button-holes, 277.

Kettle-holder, 13. [227.
Key to cutting-out diagrams,
Knickerbockers, girl's, 247.
— woman's, 248.
Knitting, finishing off last loop, 27.
— lessons for Standard I., 23.
Knitting-pin drill, 13.
Knitting, purling, 32.
Knotting, 274.

Letters, marking, 134, 138.
Lined paper, 1.
— sampler, 42.
Loops in darning, 40.
— and eyelet holes, 207.
— how to cast on, 24.
— how to cast off, 26.

Making a stitch, 12.
Mantua-maker's seam, 269.
Marking, alphabet, 138.
— cross-stitch, 135.
— samplers, remarks on, 137.
— stitch, 135.
— "true", 139.
"Material", 42.
Materials, needlework, 3.
Mull muslin, 178.

Nap of flannel, 84.
Narrowings, 75.
Needles, 4.
Needle drill, 7.
Needle-holding drill, 9.
Needlework drills, 5, 8.
— its social value, 4.
Night-gown, baby's, without blouse, 238.
— — with blouse, 238.
Night-dress, girl's, with yoke, 240, 241.
— — without yoke, 239.
Night-dress, woman's, with yoke, 241, 242, 261.
Night-shirt, man's, 235.
Numerals, marking, 138.

Object lessons, 4.
"On", 25.
"Original", 42.
"Over", 27.
Overalls, 153, 233, 207.
Overcasting, 286.

Padding of scallops, 193.
Paper apparatus, 1.
— chequered, sectional, 91.
— patterns, 90.
Patent paragon apparatus, 1.
Patterns of coral stitch, 186.
Penelope canvas, 38.
Petticoat bodice, child's, 232,
— girl's, 244. [265.
— woman's, 245.
Petticoats with straight bands, 266, 267.
Pinafores, cottage, 228.
— infants', 228.
— shoulder straps, 230, 253.
— Standards I. and II., 229.
Piping, 150.
Placket-hole, 148.
Pleating, 62.
— proportion of material to band, 63.
Pleats, width of, 63.
Ply, 84.
Position drill, 8.
— when demonstrating needlework, 5.
Position of tapes on garments, 58, 59.
"Practice pieces", 3.
Print patching, preparation of, 165.
— — sewing of, 166.

Proportions, scale of chemises, 275.
— — of drawers, 275, 276.
— — of night-dresses, 276.
— — of shirts, 277, 278.
Puckered hemming, 19.
— seam, 28.
Pupil-teachers' samplers, 280, 281.
Purl and plain knitting, 33.
Purling in knitting, 32.

Queen-stitch, 135.

Remarks on hems and hemming, 20.
— on samplers, 137.
Ribbed cuff, 34.
— knitting, 32.
Right and wrong sides of calico, 35.
Run and fell seam, 171.
Running stitch, 158.

Samplers, pupil-teachers', 280, 281.
Scale of proportions for chemises, 275.
— — for drawers, 275.
— — for night-dress, 276.
— — for shirts, 277.
Scalloping, 192.
Scissors, 89.
Seaming, 27.
— in flannel, 145.
Seams, flattening of, 30.
Sectional paper, 90.
Selvedge way of cloth, 44.
Setting in of gathers, 72.
Sew-and-fell seam, 35, 284.
Sewing on tapes, 56.
Shirt, man's night-, 235.
— boy's, 237.
— man's, 250, 251.
Shoulder straps, 254, 265.
Sleeves, chemise, 142, 241, 287.
— shirt and night-gown, 236. 239, 241.
Slip knots, 24.
— stitches, top-sewing, 31.
Split hemming, 20.
Stemming of buttons, 104.
Stiletto, 209.
Stitches, too fine, 21.
Stitching, first lesson, 42.
— second lesson, 44.
— uses, 48.

Stocking-web stitch, on cards, 219.
— — Lesson II., 223.
Stockwell Demonstration Frame, 2.
Straight hemming, 20.
Stranding for loops, 207.
— of a hole, 131, 220.
Strengthening tapes, 99.
— — straight, 101, 150.
Swiss darning, 212.

Tacking work, 1.
Tape strings, 56.
Tapes, how to finish off ends, 58.
— position of, 58, 59.
Thimble drill, 5.
Threading of darner, 38.
Threads, how to draw out, 46.
Three-cornered tears, 204.
Tissue paper, 1, 91.
Toe of stocking, how to knit, 128.
Top-sewing, 27.
Tucks, preparation of, 154.
— sewing of, 157.
— size of, 157.
Turning of Dutch heel, 125.

Upright hemming stitches, 20.

Warp, 45.
Washing glove, 13.
Weft, 45.
Wheat-ear stitch, 210.
Whipping and sewing on of frill, 178.
Whip stitch, 180.
Width of hems, 21.
Width of pleats, 63.
Woman's chemise, 231, 232.
— combinations, 248.
— petticoat, 245.
— knickerbockers, 248.
— night-dress, 241, 242.
Wool, fleecy, 13.
Work-holding drill, 8.
Wristbands, 236, 237, 251, 258.

Yarn, mending, 88.
Yokes, 257, 260, 268.
Yoke and sleeve for chemise, 241.
Yoke saddle, 244.

Zigzag stitch, 53.